



Standard Specification for Test Carpets and Pads for Vacuum Cleaner Testing¹

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1. Scope

1.1 This specification provides construction details and a replacement procedure for the standard carpet and pad to be used when testing vacuum cleaners.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 *ASTM Standards*:²

F 608 Test Method for Evaluation of Carpet-Embedded Dirt Removal Effectiveness of Household/Commercial Vacuum Cleaners³

3. Basis of Selection

3.1 These standard carpets and pads are intended to provide a database and shall meet the following requirements:

3.1.1 Representative of carpets currently in popular use in the United States.

3.1.2 Reasonable anticipation of continued availability.

3.1.3 Compatible with other ASTM Committee F11 methods.

3.1.4 Provide a separation of cleaning effectiveness ratings between products with good reliability and repeatability.

4. Classification

4.1 The carpet types shall be classified according to accepted carpet industry practice, such as shag, multilevel, plush, etc.

5. Physical Requirements

5.1 *Carpets*⁴—The following carpet types and construction have been found acceptable for use in vacuum cleaner testing. They shall be made in accordance with the physical requirements given herein.

5.1.1 Shag Custom Tufted Test Carpet Construction:

Construction type	tufted
Gage	5/16 in. (7.9 mm)
Stitches	4.2/in. (1.65/cm)
Pile height	1 1/16 in. (26.99 mm)
Pile fiber	nylon staple Allied Chemical Type 15U3PR5-15 denier per filament, bright luster, medium dye level, and 8 in. (203.2 mm) staple length
Yarn ply	1.5 count (cotton system) 2-ply tumbled autoclave heat set
Face weight	42.2 oz/yd ² (1431 g/m ²) ± 6 % variance in order to maintain the specified stitching and pile height
Yarn count	1.5/2 cc
Twist	3Z × 2.5S
Heat setting	autoclave
Shift	no
Finish	pure—no type of finish shall be applied to the yarn or carpet
Backing	woven polypropylene flat yarn with nylon fibers needle punched onto one surface
Reference Only	5.5 oz/yd ² (187 g/m ²) FLW (reversed fuzzy side down)

5.1.2 Plush Custom Tufted Test Carpet Construction:

Construction type	tufted
Gage	3/16 in. (4.8 mm)
Stitches	7.5/in. (2.95/cm)
Pile height	9/16 in. (14.29 mm)
Pile fiber	filament nylon denier 1184/70 7N66 twist 1.5Z × 2.25S autoclave heat set
Yarn ply	4 ply
Face weight	38.9 oz/yd ² (1319 g/m ²) ± 6 % variance in order to maintain the specified stitching and pile height
Finish	pure—no type of finish shall be applied to the yarn or carpet

¹ This specification is under the jurisdiction of ASTM Committee F11 on Vacuum Cleaners and is the direct responsibility of Subcommittee F11.21 on Cleanability.

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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 *Annual Book of ASTM Standards*, Vol 15.08.

⁴ Test carpets are available from Textile Innovators Corporation, P.O. Box 8, Windsor, NC 27983. The padding (CANNES 2209-68) with the construction described in 5.2 is available from General Felt Industries, Co., 80 Park Plaza West-One, Saddlebrook, NJ 07662-5864.