



Standard Specification for Test Carpets and Pads for Vacuum Cleaner Testing¹

This standard is issued under the fixed designation F 655; 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 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:

F 608 Laboratory Test Method for Evaluation of Carpet-Embedded Dirt Removal Effectiveness of Household Vacuum Cleaners²

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 F-11 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*³—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) \pm 6 % variance in order to maintain the specified stitching and pile height
Yarn count	1.5/2 cc
Twist	3Z \times 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 5.5 oz/yd ² (187 g/m ²) FLW (reversed fuzzy side down)

Reference Only

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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	5/16 in. (14.29 mm)
Pile fiber	filament nylon denier 1184/70 7N66 twist 1.5Z \times 2.25S autoclave heat set
Yarn ply	4 ply
Face weight	38.9 oz/yd ² (1319 g/m ²) \pm 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

Reference Only

Backing material:	
Primary	polypropylene, 3 1/2 oz/yd ² (118.7 g/m ²)
Secondary	jute, 7 oz/yd ² (237.3 g/m ²)
Back coating	latex, 24 oz/yd ² (814 g/m ²)
Finished weight	72 oz/yd ² (2442 g/m ²)

5.1.3 Multilevel Custom Tufted Test Carpet Construction:

Construction type	tufted
Gage	5/32 in. (3.97 mm)
Stitches	6.5/in. (2.56/cm)
Pile height	5/16 in. (14.29 mm)

¹ This specification is under the jurisdiction of ASTM Committee F-11 on Vacuum Cleaners and is the direct responsibility of Subcommittee F11.21 on Cleanability.

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² *Annual Book of ASTM Standards*, Vol 15.07.

³ 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.