



PERFORMANCE, THROW IN MAT ASSEMBLIES, CARPETED

WSS-M15P44-B

1. SCOPE

This specification defines the standard requirements for a good quality, carpeted throw-in mat which consists of carpet and substrate material.

2. APPLICATION

This specification was released for tufted throw-in mats designed to protect floor coverings.

2.1 LIMITATION

Nonwoven carpets are not applicable to this specification.

3. REQUIREMENTS

3.1 APPROVED SOURCES

This specification is performance based and does not have approved sources.

3.2 CONDITIONING AND TEST CONDITIONS

All test values are based on material conditioned for not less than 24 h prior to testing in a controlled environment of 23 +/- 2 °C and 50 +/- 5% relative humidity. Testing of the material should occur in the conditioning environment or soon after removal.

3.3 PERFORMANCE CRITERIA

3.3.1 In addition to the requirements listed herein, the end-item floor mat assembly (molded or otherwise fabricated), shall meet all requirements of the material specifications for the individual components, as well as SDS requirements. Edge binding used on floor mats shall meet WSS-M8P24-A and serge thread used on floor mats shall meet WSS-M8P22-A.

3.4 TESTING

All evaluations shall be conducted on test specimens taken from production representative throw-in mat assemblies. See Table 1 for testing requirements and sample size. Final determination of pass/fail criteria for the italicized items will be made by Ford Materials Engineering.

PEC/FEC/PV testing must be conducted in compliance with program milestones unless otherwise specified by Ford Engineering. See Table 2 for DV/PV testing.

3.5 APPEARANCE

The color, pattern, hand and face construction shall match the approved Design Center master sample.

Date	Action	Revisions	Rev 04
2017 10 27	Revised	See Summary of Revisions	L. Sinclair, NA
2016 11 17	Revised	See Summary of Revisions	L. Sinclair, NA
2008 06 25	Activated		L. Schmalz, NA L. Williams, FOF

**3.6 WEIGHT**
(FLTM BN 106-01)

The fiber weight shall be specified in the Material Specification and total weight shall be as specified in the Supplement Form.

3.7 RESISTANCE TO MILDEW
(7 days at 98 +/- 2% relative humidity and 38 +/- 2 °C,
Specimen size 100 mm x 100 mm)

Remove the part from the cabinet and evaluate (smell the sample) immediately. The part shall exhibit no visible evidence of mildew growth and / or objectionable odor after the 7 day exposure. In addition, part must not separate layers or show any other visual deterioration.

3.8 ODOR
(FLTM BO 131-03, Variant C)

Condition 1 (23 +/- 2 °C)	Rating 3 max.
Condition 2 (40 +/- 2 °C)	Rating 3 max.
Condition 3 (65 +/- 2 °C)	Rating 3 max.

3.9 PHOTOMETRIC FOGGING
(SAE J1756, except
3 h at 100 °C heating, 21 °C cooling
plate, post test conditioning 16 h)

Fog Number 70 min

Formation of clear film, droplets or crystals is cause for rejection.

For shipping, all materials or parts shall be sampled immediately after manufacture, then bagged in a zipper- or slide-sealed polyethylene (PE) bag, PE-coated aluminum bag or wrapped in aluminum foil prior to bagging. Test specimens shall be cut, then stored in a clean, open environment for 14-28 days. After 14-28 days of air exposure, the specimens shall be tested immediately or re-bagged until testing can be performed. Bagged materials or parts must be labelled on the outside of the bag with the following information, and included in the test report: supplier, contact information, product code/trade name or part number, manufacturing location, date of manufacture, shipping date, start and end dates of conditioning period and test date.

3.10 PHYSICAL PROPERTIES**3.10.1 Water Shrinkage**
(FLTM BN 105-01/SAE J883)

WMD & AMD 2.0% max

3.10.2 Heat Shrinkage
(FLTM BN 105-01/SAE J883 Except
instead of water, use 7 days at 80 +/- 2 °C)

WMD & AMD 2.0% max

**3.10.3 Dimensional Stability (FLTM
BN 105-03, 2 cycles)**

WMD & AMD, expansion and contraction



- 3.10.4 Tensile Strength
(ASTM D 5034)
- WMD & AMD
- Dry and Wet (immersed)
400 N min
- 3.10.5 Tensile after Aging
(FLTM BO 116-01 age face carpet
225.6 kJ/m², ASTM D5034)
- 80% of Original min
- 3.10.6 Trapezoidal Tear,
(ASTM D 5587, Option 1 (Multiple Peak Force Average))
- WMD and AMD
- Dry and Wet
90 N min
- 3.10.7 Pile Tuft Pull Strength
(ASTM D1335 original)
- Room Temperature 16 N min
Tuft Pull after 7 days at 80+/-2 °C (pull at Room Temperature) 10 N min
- 3.10.8 Resistance to Heat
- Test Method: Place in an oven stacked, a raw carpet with no insulation(on bottom), floor mat assembly (on top), with a 2 kg load, maximum of area 5800 mm², at 80 +/- 2 °C for 6 hours. 100mm x 100 mm sample size.
- Raw carpet construction tested will be program dependent.
- There shall be no adhesion of the floor mat assembly to the raw carpet, or flattening of the nibs (if applicable).
- 3.10.9 Adhesion of Carpet To Substrate
(FLTM BN 151-05 speed 300 mm/min
Carpet to backing)
- 0.96 N/ mm min
or failure to initiate
- 3.10.9.1 Original
- WMD & AMD
- 3.10.9.2 Cycled
- WMD & AMD
- 4 h in the humidity cabinet at 98 +/- 2 % relative humidity and 38 +/- 2 °C.
 - 4 h or overnight (16 h max) in the cold box at -35 +/- 1 °C.
 - 4 h in an oven at 85 +/- 2 °C.
 - After cycling, condition the samples for 1 h at 23 +/- 2 °C and 50 +/- 5 % relative humidity.
- 3.10.9.3 Immersed
- (Immerse the test specimen in tap water at 23 +/- 2 °C for 24 h, then pull)
- WMD & AMD
- Note: Primary foundation material (scrim) tearing through the tufted carpet leaving the tufts adhered to the mat backing also constitutes a pass if N/mm value falls below the minimum.
- 3.10.10 Cold Resistance
(SAE J323, Method A, 15mm
mandrel carpet face down)
- No cracking or delamination