

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

FELT, SOUND ABSORPTION, SELF-ADHESIVE

WSK-M99G145-C1

FELT, SOUND ABSORPTION, SELF-ADHESIVE, 12 mm NOMINAL

WSK-M99G145-C2

FELT, SOUND ABSORPTION, SELF-ADHESIVE, 18 mm NOMINAL

WSK-M99G145-C3

1. SCOPE

The material defined by this specification is one-sided self-adhesive moisture resistant synthetic resin bonded non-woven fiber padding consisting of natural and recycled fiber material. The adhesive film (hot melt adhesive) is covered by release paper or foil.

2. APPLICATION

This specification was released originally for material used as sound absorber in the passenger compartment and bonded to inner side of roof, door and instrument panel.

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

3.1 QUALITY SYSTEM REQUIREMENTS

Material suppliers and part producers must conform to the Company's Quality System Requirements.

3.2 INFRARED SPECTROPHOTOMETRY AND/OR THERMAL ANALYSIS

IR spectra and thermograms established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce IR spectra and thermograms that correspond to the reference standard when tested under the same conditions.

3.3 CONDITIONING AND TEST CONDITIONS

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Date	Action	Revisions
2001 10 10	Activated	Replaces ESK-M99G145-A1/A2/A3 W. Scholz/P. Purcell

Printed copies are uncontrolled

Page 1 of 9

Copyright © 2001, Ford Global Technologies, Inc.

Note: Samples for control and routine checks shall be submitted as required by Quality Control. The material shall be conditioned for a min of 24 h at 23 +/- 2 C and 50 +/- 5 % relative humidity prior to test.

If not otherwise specified use test panels EC-coated according to FLTM BI 120-01, C.

3.4 ABSORPTION MATERIAL

3.4.1	Color	Any		
		A1	A2	A3
3.4.2	Thickness, mm (ASTM C 167)	4.5 - 9.5	8.5 - 16	15 - 22
3.4.3	Density, kg/m ³ (ASTM D 2395, Method A)	60 - 85	50 - 75	50 - 75
3.4.4	Splitting Resistance	See Figure 1		
3.4.4.1	Original, min	0.4 N/cm ²		
3.4.4.2	After Aging, max (14 d at 70 +/- 2 °C, 24 h at room temperature)	- 10 %		
	Test Method:			
	1)	5 test specimens 100 x 100 mm shall be bonded to 2 specimen holders each and conditioned for 24 h at room temperature (use adhesive S-M2G4610-A or equivalent).		
	2)	Determine splitting resistance in a tensile machine at a rate of pull of 25 mm/minute.		
3.4.5	Sound Absorption (ASTM C 384)	See Table 1		

3.4.6 Air Flow Resistance 2.0 - 3.5 x 10E4 Rayl/m
(ASTM C 522, specimen dimension: 98 mm diameter)

Where: R = Air Flow Resistance
P = Air Pressure Difference, in "mm" Water Column
Q = Volume Velocity of Air Flow, in Liter/min
d = Thickness in mm

Note: This test shall be performed on specimens without adhesive coating.

The supplier is required to provide such samples on request from Quality Control.

3.5 FINISHED PART REQUIREMENTS

3.5.1 Dimension As specified on
Engineering drawing

3.5.2 Staining None

Test Method: (See Figure 2)

Place a light colored production headlining sample in intimate contact with an approximately 100 x 300 mm fiber pad sample and expose for 120 h in the Florescent Sunlamp Cabinet with the headlining facing the light source and adhesive side of fiber pad bonded to the panel (see FLTM BU 152-02).

3.5.3 Adhesion After Heat Aging

No loss of adhesion, no delamination or splitting of fiber material, no chipping.

Test Method:

- 1) Apply 280 x 280 mm pieces of test material to 300 x 300 x 1.5 +/- 0.1 mm test panels, prepared according to para 3. Note, with the tacky side bonded to the panel and press together evenly using a roller according to ASTM D 1000.
- 2) After conditioning at room temperature for 2 h expose test specimens in inverted position oven at 120 +/- 2 °C for 120 h.