



PERFORMANCE, LAMINATION FOR SEATING AND INTERIOR TRIM

WSS-M8P30-A1

1. SCOPE

This specification defines the performance requirements for laminated composites used for interior seating and trim components.

2. APPLICATION

This specification was released originally for laminated composites that have undergone a process to 100% bond a minimum of two materials through either a flame or adhesive application. For example, fabric/foam, polymeric film/foam, leather/scrim, leather/foam/scrim or fabric/foam/scrim, or fabric/spacer knit.

2.1 LIMITATIONS

This specification does not apply nor include bond requirements for Instrument Panels, Pillars, or Headliner substrates.

3. REQUIREMENTS

3.1 APPROVED SOURCES

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

3.2 DV/PV/PPAP TEST PLAN

Testing should comply with program milestones unless otherwise specified by Ford Engineering. See Table 1.

3.3 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.

3.4 FOGGING (PHOTOMETRIC)

(SAE J1756, 3 h at 100 °C heating, 21 °C
Cooling plate, post testing 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.

Date	Action	Revisions	Rev. 0.0
2017 11 13	Released		



Sample shall be tested as part of a production assembly composite if it is 100% bonded. If not 100% bonded, test each component separately. Parts for testing must be labelled with supplier name and date of manufacture.

3.5 FOGGING (GRAVIMETRIC) FOR LEATHER ONLY

(SAE J1756 16 h at 100 °C heating, 21 °C cooling plate, post testing conditioning, 4 h)

Weight of Condensate

4.0 mg max

After conditioning, the samples shall be pre-dried by storing in a desiccator over silica gel or equivalent for a period of 2 days.

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.

Sample shall be tested as part of a production assembly composite if it is 100% bonded. If not 100% bonded, test each component separately. Parts for testing must be labelled with supplier name and date of manufacture.

3.6 ODOR

(FLTM BO 131-03, Variant C)

Condition 1
Condition 2
Condition 3

Rating 3 max
Rating 3 max
Rating 3 max

Sample shall be tested as part of a production assembly composite if it is 100% bonded. If not 100% bonded, test each component separately.

3.7 FLAMMABILITY

(ISO 3795, Test 5 Samples)
Burn Rate

100 mm/minute max

Samples shall be tested as part of a production assembly composite if it is 100% bonded.

3.8 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.



3.9 LAMINATE REQUIREMENTS

Materials engineering must approve the foam source used in a laminated composite. Foam sources must meet WSS-M99P48-A2/latest.

3.9.1 Determination of 180 Degree Peel Adhesion Strength (FLTM BN 151-05)

The material shall not separate cleanly from the foam surface. When peeled, the specimen must exhibit foam particles adhering to the B surface of the A surface material

A Surface to foam	Flame Bonded (N min)	Adhesive Bonded (N min)
3.9.1.1 As received	6.0	6.0
3.9.1.2 Long Term Environment (FLTM BO 040-01 Procedure B, 100 +/-2 °C)	6.0	6.0

The material must not exhibit staining, color tone change, change in hue, or other deterioration after exposure.

3.9.1.3 Cleaning (Refer to FLTM 112-08 for cleaning agents to apply to A surface. Allow to dry, and then test for adhesion)	6.0	6.0
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Backing fabric to foam (i.e. scrims such as, knit, woven or non-woven)

3.9.1.4 As received	3.5	3.5
3.9.1.5 Long Term Environment (FLTM BO 040-01 Procedure B, 100 +/-2 °C)	3.5	3.5

The material must not exhibit staining, color tone change, change in hue, or other deterioration after exposure.

Foam tear that occurs prior to reaching the requirement, is considered a Bond Stronger than Foam (BSTF) and will be considered a Pass if noted Foam Tear or BSTF on the Report.

Note: These requirements do not apply to PE film.

3.10 LAMINATE THICKNESS

(ASTM D1777, circular presser foot, area 645 mm²
2.8 g force, 43 pa)

Report Only, Total Composite Thickness