



TRIM ASSEMBLY, ENCLOSED LUGGAGE COMPARTMENT COVERING

WSS-M15P32-D

1. SCOPE

The material defined by this specification is the minimum durability and performance requirements of all enclosed carpeted luggage or load compartment trim components where various materials are combined to provide a trim assembly having decorative and/or functional features. This includes: rear seat back trim in enclosed luggage compartment applications, deck lid trim and spare tire covers (not for exposed load compartment applications).

2. APPLICATION

This specification was released originally for material used as enclosed luggage compartment trim parts.

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 individual carpet assembly components shall meet all the requirements of the applicable material specifications for the carpet, padding, adhesive, barrier, or trim application as well as any functional/SDS requirements as outlined by Engineering. Material specification requirements are to be used mainly for initial qualification of materials.

3.3.2 Mold in Color plastic components shall meet the requirements of WSS-M15P4-G/latest.

3.3.3 Painted components shall meet the requirements of WSS-M2P188-B1/latest for paint over plastic or WSS-M2P190-A / latest if paint over metal.

3.3.4 Labels must meet the appropriate suffix of WSS-M99P41-A10-A72/latest.

3.4 SAMPLE SELECTION

See Table 1 and 2 for sample size and testing requirements. When production test specimens are taken from an area in the carpet with padding, the padding should be stripped away as much as possible before evaluation, unless otherwise specified.

Date	Action	Revisions	Rev. 4
2017 12 01	Revised	See Summary of Revisions	L. Sinclair, NA
2016 07 08	Revised	See Summary of Revisions	L. Sinclair, NA
2011 10 17	Activated	Replaces WSS-M15P32-C	L. Sinclair, NA, J. Williams, Eu



3.5 COMPOSITION AND CONSTRUCTION

Shall be as specified on the Material Specification. The Carpet Supplement Form shall be completed and submitted to Materials Engineering with the construction package.

Backcoating: The backcoating shall form a continuous and uniform coating over the back of the carpet so that all pile fibers are covered. Also, the backcoat shall show no evidence of cracking or crumbling during any of the evaluations required within the specification and during normal field conditions. The backcoat shall thoroughly saturate the base of the pile fiber bundles to ensure adequate fiber lock. Penetration of the backcoat through to the face of the carpet shall be controlled to provide the required resistance to abrasion and fiber loss, but backcoat shall not be visible on the face of the pile fiber.

If the carpet does not have a back coating it shall be a fused backed carpet.

3.6 APPEARANCE

The color, pattern, and finish shall match the approved Design Center master sample.

3.7 PHYSICAL PROPERTIES

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|-------|--|---|
| 3.7.1 | Short Term Environmental Cycling
(FLTM BO 040-01, Procedure A, 80 °C, except run
evaluation on rolled goods 300 x 300 +/- 2
mm) | Rating 4 min
2% max Shrinkage/
Expansion* |
|-------|--|---|

Note: For Construction Approval/New Manufacturing Location run evaluation on plaques
(210 x 297 mm).

*For construction approval only.

- | | | |
|-------|---|---|
| 3.7.2 | Long Term Environmental Cycling
(FLTM BO 040-01, Procedure B, 80 °C, except run
evaluation on rolled goods 300 x 300 +/- 2
mm) | Rating 4 min
2% max Shrinkage/
Expansion* |
|-------|---|---|

Note: For Construction Approval/New Manufacturing Location run evaluation on plaques
(210 x 297 mm).

*For construction approval only.

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|-------|---|
| 3.7.3 | 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.

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|-------|---|
| 3.7.4 | Stretch and Set (for cut and sew seat back applications only)
(SAE J855) |
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WMD & AMD Stretch	18% max
WMD & AMD Set	5% max



3.8 APPEARANCE PROPERTIES

- 3.8.1 Resistance to Interior Weathering
(FLTM BO 116-01,
AATCC Evaluation Procedure 1)
- 225.6 kJ/m² Rating 4 min
- 3.8.2 Fiber Deterioration after UV Exposure
(FLTM BN 108-02, 500 g load, H-10 wheels)
- 900 cycles
- No deterioration of fibers or yarns after testing to the applicable exposure levels in section 3.5.1 on molded production components. See Appendix 1 for failure criteria.
- 3.8.3 Crocking Test
(FLTM BN 107-01
AATCC Evaluation Procedure 2)
- Dry Rating 4 min
Wet Rating 4 min
- 3.8.4 Soiling and Cleanability
(FLTM BN 112-08,
AATCC Evaluation Procedure 2)
- Soil Rating 4 min
Grease Rating 4 min
Coffee Rating 4 min

3.9 WEAR PROPERTIES

- 3.9.1 Resistance to Abrasion
(FLTM BN 108-02, 500 g load, H-10 wheel)
- 1200 cycles
- The carpet shall exhibit no visual evidence of wear through to the foundation of the pile fibers in the abraded area. See Appendix 1 for acceptance criteria. No roping or pilling allowed. No other visual degradation or deterioration of the carpet after testing is allowed.
- 3.9.2 Resistance to Snagging
(FLTM BN 108-02, 500 g load, H-18 wheels)
- 50 cycles
- No evidence of fiber pullout allowed. See Appendix 2 for acceptance criteria. No other visual degradation or deterioration of the carpet after testing is allowed.

3.10 COMPOSITE TESTING

- 3.10.1 Short Term Environmental Cycling
(FLTM BO 040-01, Procedure A, 80 °C)
- Rating 4 min
- 3.10.2 Long Term Environmental Cycling
(FLTM BO 040-01, Procedure B, 80 °C)
- Rating 4 min
- 3.10.3 Cold Impact (Floor Components Only)
(Age 24 h at 80 +/- 2 °C, then condition for 5 h at - 30 °C)

Rubber Ball



4.5 kg weight, 127 mm dia
60 +/- 5, Durometer "A",
(ISO 686/ASTM D 2240)

Mount the portion of the assembly to be tested on an actual or simulated production support foundation with the approved retention methods. Condition the sample then remove from the cold box and immediately (within 10 seconds), drop the rubber ball from a height indicated below in the most adverse locations as noted on the Engineering Drawing. Within the next 110 seconds, remove the trim from the actual or simulated production support foundation and evaluate. (See section 4 for rubber ball supplier contact information).

Drop Height 610 mm

The assembly shall show no evidence of cracking or breaking on either side of the part after the ball drop test or removal from the support foundation and shall fully recover from indentation caused by the ball drop test in the time required for the assembly to return to 23 +/- 2 °C.

Evaluation should be performed on the substrate avoiding any mold in color handles, etc. Breakage of mold in color plastics does not constitute a failure.

3.10.4 Adhesion of Cover Material to Substrate (FLTM BN 151-05, crosshead speed 300 mm/minute)

Original 10 N min

Cycled 7 N min
(Short Term Environmental Cycling para. 3.10.1)

Heat 7 N min
(Long Term Heat Exposure para. 3.10.2)

Test Method: The above method is to be employed for all dielectric, heat or adhesively bonded materials. Individual bond lines less than 25 mm must also meet the above minimum requirements when computed on a per mm basis.

Special bonded sections such as corrugated design, etc., as well as extra wide bonded areas exhibiting low prorated bond strength values may be accepted provided they have been approved by the Materials Engineering Activity.

3.11 FOGGING 70 min (SAE J1756, 3 h at 100 °C heating, 21 °C cooling plate, post test conditioning 16 h)

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

Test sample preparation:

For parts with any back side adhesively attached items (i.e. felt, flock, tape, hook and loop, foam, etc.) test samples should be cut from areas that include the largest amount of each attached item.

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