



FLEXIBLE COVERSTOCK, SLUSH MOLDABLE THERMOPLASTIC POLYURETHANE (TPU), SEAMLESS PAB INSTRUMENT PANEL

WSS-M2D518-A1

1. SCOPE

The material defined by this specification is a slush molded TPU skin that is UV stabilized, heat stabilized, and has excellent low temperature ductility used for seamless passenger airbag instrument panels.

2. APPLICATION

This specification was released originally for the 2018 MY Focus program, as a flexible molded skin for the seamless passenger airbag instrument panel over foam and plastic substrates.

2.1 LIMITATIONS

This material is only to be used for instrument panel applications where laser scoring of the skin is required for airbag deployment.

3. REQUIREMENTS

3.1 APPROVED SOURCES

This specification requires the use of approved sources. Only the sources identified on the Ford Approved Source List (ASL) can be used when this specification is listed on the drawing, CAD file, or other documents. The list of approved sources is located within Ford at www.mats.ford.com or available externally through a Ford Materials Engineer.

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 INFRARED SPECTROPHOTOMETRY AND/OR THERMAL ANALYSIS

IR spectra and thermograms from initial material approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. The material supplier shall ensure that all future material supplied to the specification shall produce IR spectra and thermograms that correspond to the reference standard when tested under the same conditions.

3.4 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

3.4.1 This specification is based on virgin material and does not allow the addition of recycled content (PIR/PCR).

3.4.2 Performance Criteria:

Parts using this material must also meet the requirements in WSS-M15P45-C/Latest and must fulfill applicable SDS/CDS requirements.

3.4.3 Ford Materials Engineering may request a Control Plan and Certificate of Analysis (C and A) containing lot testing requirements which must include, but are not limited to:

Date	Action	Revisions	Rev. 0
05 23 2017	Released		



Documents

S.Gatzek, NA
Document Sharing Hub



Density
Hardness

3.5 SAMPLE PREPARATION

All tests shall be carried out on production materials manufactured from the production process unless correlation to a non-production process has been reviewed and approved by Ford Materials Engineering.

Unless otherwise specified, all tests shall be carried out on specimens die cut from uniformed sheets. No additional annealing is allowed.

For appearance testing, grain to be specified by Materials Engineering.

3.6 APPEARANCE

3.6.1 Color and Gloss

The color, pattern and gloss shall match the approved Corporate Design master sample.

3.6.2 Resistance to Interior Weathering Rating 4 min (FLTM BO 116-01, 3609.6kJ/m² exposure, AATCC Evaluation Procedure 1)

After exposure the material shall show no fading or color change in excess of the specified AATCC rating. In addition, there shall be no cracking, crazing or other deterioration.

3.6.2.1 Tackiness of Interior Materials after Weathering* (FLTM BO 061-01)

*When setting machine for automatic shutoff, every 526.4 kJ/m² is recommended.

3.6.3 Colorfastness to Burnt Gas Fumes Rating 4 min (AATCC 23 or equivalent method, 168 hours at 60 °C, AATCC Evaluation Procedure 1)

Whitening, blooming, spewing, chalking, exudation, etc. on the surface of the samples shall be cause for rejection.

3.6.4 Resistance to Abrasion (SAE J948, CS-10 wheels, 500g, 250 cycles)

The surface shall show no evidence of wear through. A change in gloss will be evaluated by Materials Engineering for acceptability.

3.6.5 Resistance to Scuffing (SAE J365, Scuff Head A, 250 cycles)

The surface shall show no evidence of wear through. A change in gloss will be evaluated by Materials Engineering for acceptability.

3.6.6 Resistance to Migration Staining and Blocking Rating 5 min (FLTM BN 103-01, AATCC Evaluation Procedure 1)

No evidence of exudation, adhesion (tackiness), separation, color transfer, staining, or flattening of the embossing when material is placed in the following positions:

Top surface to top surface

