

**THERMOPLASTIC ELASTOMERIC MOLDING COMPOUND
PAINTED AIRBAG COVER****WSS-M4D981-B1****1 SCOPE**

The material defined by this specification is a thermoplastic polyolefinic elastomer.

2 APPLICATION

This specification was released originally for painted airbag covers. The first surface must be painted with ultraviolet and heat resistant paint (WSS-M15J15-A1) Parts produced with this material must also meet the appropriate airbag System Design Specification (SDS).

3 REQUIREMENTS**3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS**

Material suppliers and part producers must conform to the Company's Standard Requirements for Production Materials (WSS-M99P1111-A). Many 4D resin specifications prior to 2011, identified certain requirement with the symbol (s), which indicated that the mean and +/- 3 sigma values were to be reported. The specification minimum, maximum or range was established using 3 sigma data. For 2011 and beyond, refer to Table 1 for number of samples required for each test.

3.1.1 Materials used in interior applications must meet the requirements outlined in WSS-M99P2222-D1/Latest, Performance, Vehicle Interior Environment Quality Material/Component Requirements. Data must be included in material submission package.

3.1.2 Performance Criteria:
Parts using this specification shall meet the appropriate performance specifications, WSS-M2P188-A1/ Latest.

3.2 SAMPLE PREPARATION

Unless otherwise specified all tests shall be carried out on injection molded, one-end gated test specimens. The test specimens A and D shall be molded using molding conditions defined in ISO 1873-2. No annealing is allowed. See Tables 1 and 2 for the number of samples required.

Specimens shall be as follows:

Specimen A	150 minimum x 10 x 4.0 +/- 0.2 mm (ISO 527-2, Specimen Type 1A)
Specimen B	355 x 100 x 1.0 +/- 0.1 mm (ISO 3795)
Specimen C	145 x 60 x 3.2 +/- 0.2 mm
Specimen D	Center of Specimen A, 80 x 10 x 4.0 +/- 0.2 mm
Specimen E	100 mm diameter x 3.2 mm
Specimen F	80 mm diameter x 3.2 mm
Specimen G	90 mm x 200 mm
Specimen H	50 +/- 1 mm diameter x 3.2 +/- 0.2 mm
Specimen I	100 mm x 150 mm, min

Date	Action	Revisions	Rev. 0
2013 01 04	Released		

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Documents

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3.3 MATERIAL PROPERTIES

3.3.1	Density (ISO 1183, Method A)	0,87 – 0,93 g/cm ³
3.3.2	Hardness, Durometer D (ISO 868, 15 s dwell)	40 - 54
3.3.3	Tensile Strength at Break (ISO 527-1 and ISO 527-2, Specimen A, 50 mm/minute test speed)	7 - 20 MPa min
3.3.4	Elongation at Break (ISO 527-1 and ISO 527-2, Specimen A, 50 mm/minute test speed)	300 % min
3.3.5	Flexural Modulus	220 MPa min
3.3.6	(ISO 178, Specimen D, 64 mm support span, 2 mm/minute test speed)	
3.3.7	Heat Aging Performance (ISO 188, 150 +/- 50 air changes/h, 1000 h at 110 +/- 2 °C, After heat aging test specimens are to be conditioned in a desiccator for 3 - 5 h at 23 +/- 2 °C. Unaged property values shall be determined at the time of the aged properties determination)	
3.3.7.1	Tensile Strength at break, Change (Test Method per para 3.3.3)	+/- 25% max
3.3.7.2	Elongation at break, Change (Test Method per para 3.3.3),	+/- 25% max
3.3.8	Odor (FLTM BO 131-03, Variant C, Specimen G)	Rating 3 max
3.3.9	Fogging Photometric (SAE J1756, Specimen F, 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.	
3.3.10	Flammability (ISO 3795/SAE J369, Specimen B, smooth surface) Burn Rate	100 mm/minute max

3.4 MATERIAL PROPERTIES – REPORT ONLY

Values are retained in Ford Materials Database www.fmd.ford.com.