



THERMOPLASTIC ELASTOMER MOLDING COMPOUND, EXTERIOR PVC AND NITRILE RUBBER MOLECULAR BLEND

WSB-M2D477-A

1. SCOPE

The materials defined by this specification is a flexible thermoplastic elastomeric injection and/or extrusion molding compound based on a PVC and nitrile rubber molecular blend.

2. APPLICATION

This specification was released originally for material used for exterior mirror gasket applications.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.1.1 All requirements of this specification, identified by symbol (s), shall be met with data representing 3 sigma values.

3.3 DYNAMIC MECHANICAL ANALYSIS (ASTM D 4065)

Ford Motor Company, at its option, may establish a shear modulus/damping vs. temperature curves plotted for -50 to +170 °C temperature range for material/parts supplied to this specification. The shear modulus and damping curves established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce shear modulus and damping curves that correspond to the reference standard when tested under the same conditions.

3.5 MOLDED TEST SPECIMEN

3.5.1 Preparation of Test Specimens

Unless otherwise specified, all test shall be conducted on specimens die cut from injection molded plaques 150 x 100 x 2.0 +/- 0.2 mm. The plaques shall be molded according to ISO 294 and film gated along the upper 100 mm edge. No annealing allowed, unless specified otherwise.

3.5.2 Density 1.18 +/- .08 g/cm³
(ISO 1183, Method A)

3.5.3 Hardness, International 70 +/- 5
(ISO 48)

Date	Action	Revisions
2004 10 18	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.4, 3.8, 3.9 & 4; Corrected numbering 3.5.10, 3.7.2, 5
1995 03 16	Revised	Completely revised
1994 07 18	Released	NB00I10043054343



	3.5.4	Hardness, Durometer A (ISO 868, 6 mm thick, plied-up specimen, instantaneous reading)	75 +/- 5
(s)	3.5.5	Tensile Strength, min (ISO R 527, type 2, 115 x 6 x 2.0 +/- 0.2 mm specimen, 500 mm/minute test speed)	9.0 MPa
(s)	3.5.5.1	Elongation at Break, min (Test acc. to para 3.5.5)	300%
(s)	3.5.6	Tear Strength, min (ISO 34, Method B, Procedure A)	
	3.5.6.1	Parallel to Flow	25 kN/m
	3.5.6.2	Perpendicular to Flow	18 kN/m
	3.5.7	Compression Set, max (ISO 815, large type-plied specimen)	
(s)	3.5.7.1	22 h at 70 +/- 1 °C	60%
(s)	3.5.7.2	70 h at 100 +/- 2 °C	75%
(s)	3.5.8	Brittleness Point, max (ASTM D 2137, Method A)	-30 °C
	3.5.9	Ozone Resistance, max (FLTM BP 101-01, at 20% elongation)	Rating 0
	3.5.10	Heat Aging (ISO 188, except 150 +/- 50 air changes/h, 1000 h at 80 +/- 2 °C)	
	3.5.10.1	Hardness Change, max	+/- 15
	3.5.10.2	Tensile Strength Change, max	+/- 50%
	3.5.10.3	Elongation Change, max	+/- 70%
	3.5.10.4	Brittleness or Bend Test	No cracks

3.6 FLAMMABILITY (ISO 3795)

Burn Rate, max 100 mm/minute

The specimen size required for material approval is 355 x 100 x 1.5 +/- 0.1 mm with a smooth surface.