

**POLYPROPYLENE (PP) COPOLYMER, 13% TALC FILLED
COLOR PIGMENTED MOLDING COMPOUND, INTERIOR****WSB-M4D841-A3****1. SCOPE**

The material defined by this specification is a molding compound based on polypropylene copolymer, 11 - 15% mineral (talc) filled, molded-in-color, low gloss, UV stabilized for unpainted interior.

2. APPLICATION

This specification was released originally for material used for CD334/338/378 sunvisor vanity mirror frame and cover.

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.

3.4 MOLDING COMPOUND

- | | | | |
|-----|-------|---|----------------------|
| (s) | 3.4.1 | Melt Flow Rate
(ISO 1133, 230 °C, 2.16 kg) | 15 - 25 g/10 minutes |
| (s) | 3.4.2 | Mineral Content
(ISO 3451/1, Method A,
650 +/- 25 °C, talc) | 11 - 15% |

3.5 MOLDED TEST SPECIMEN**3.5.1 Preparation of Test Specimens**

Unless otherwise specified all tests shall be carried out on injection molded one-end gated test specimens.

The following dimensions are required:

- A. 150 min x 10 x 4.0 +/- 0.2 mm (Tensile Bar, ISO 3167)
B. 120 x 10 x 4.0 +/- 0.2 mm

Date	Action	Revisions
2005 09 28	Revised	Inserted 3.0; deleted 3.1, 3.2, 3.3, 3.5.5, 3.9, 3.10 & 4; revised 2, 3.5.3, 3.5.4, 3.5.6.1, 3.5.6.3, 3.7; added 3.5.9, 3.8.3 & 5.6; added drawing on page 5; title revised
1994 11 02	NB00I10043054374	Released



Specimens with shorter dimensions shall be cut from the center portion of the test specimen A and/or B. The specimens shall be prepared according to ISO 294. No annealing allowed.

	3.5.2	Density (ISO 1183, Method A)	0.97 - 1.02 g/cm ³
(s)	3.5.3	Tensile Strength at Max Load, min (ISO 527-1 & ISO 527-2, 150 minimum x 10 x 4.0 +/- 0.2 mm specimen, 50 mm/min)	24 MPa
(s)	3.5.4	Flexural Modulus, min (ISO 178, 80 x 10 x 4.0 +/- 0.2 mm specimen, 2 mm/min test speed, 64 mm support span)	1.4 GPa

The data to be completed only at initial approval.

(s)	3.5.6	Impact Strength, Izod, min (ISO 180/1A, 80 x 10 x 4.0 +/- 0.2 mm specimen, 10 specimens for each test)	
	3.5.6.1	At 23 +/- 2 °C	2.8 kJ/m ²
	3.5.6.2	At -40 +/- 1 °C	2.0 kJ/m ²
	3.5.6.3	At -15 +/- 2 °C	2.1 kJ/m ²

The test specimens must be conditioned for minimum of 6 h at the above specified temperature prior to impact test. Low temperature testing shall be done within the cold box.

(s)	3.5.7	Heat Deflection Temperature, min (ISO 75, 120 x 10 x 4.0 +/- 0.2 mm specimen, 0.32 +/- 0.01 mm deflection)	
	3.5.7.1	At 1.80 MPa	55 °C
	3.5.7.2	At 0.45 MPa	99 °C
	3.5.8	Heat Aging Performance (ISO 188, except 150 +/- 50 air changes/h, 1000 h at 130 +/- 2 °C. Unaged property values shall be determined at the time of the aged properties determination)	
	3.5.8.1	Tensile Strength Change (Test Method per para 3.5.3)	+/- 25%