



ACRYLONITRILE BUTADIENE STYRENE (ABS),
POST CONSUMER RECYCLATE MOLDING COMPOUND

WSB-M4D908-A

ACRYLONITRILE BUTADIENE STYRENE (ABS), HEAT RESISTANT,
POST CONSUMER RECYCLATE MOLDING COMPOUND

WSS-M4D908-A2

1. SCOPE

WSB-M4D908-A1: The material defined by this specification is a thermoplastic molding compound based on acrylonitrile/butadiene/styrene (ABS) containing a minimum of 25% post consumer recycled ABS.

WSB-M4D908-A2: The material defined by this specification is a higher heat resistant thermoplastic molding compound based on acrylonitrile/butadiene/styrene (ABS) containing a minimum of 25% post consumer recycled ABS.

2. APPLICATION

WSB-M4D908-A1: This specification was released originally for material used for a console base. This material is recommended for non-exposed applications only.

WSB-M4D908-A2: This specification was released originally for material used for painted radiator grilles.

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 these specifications, identified by symbol(s), shall be met with data representing 3 sigma values.

3.4 MOLDING COMPOUND

		A	A2
(s)	3.4.1 Melt Flow Rate, g/10 minutes (ISO 1133, 230 °C, 3.8 kg, for 75% Virgin +25% PCR)	1.0 - 7.1	3.0 - 10.0

The material shall be dried for 5 h minimum at 100 °C in a mechanical convection oven immediately preceding the test.

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.

Date	Action	Revisions
2006 06 23	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.8, 3.9 & 4
1995 02 02	Activated	WSS-M4D908-A2
1994 11 02	Released	NB00110043054373

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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

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.

		A	A2
	3.5.2 Density, g/cm ³ , min (ISO 1183, Method A)	1.04	1.02
(s)	3.5.3 Tensile Strength at Yield, MPa, min (ISO R 527, 150 minimum x 10 x 4.0 +/- 0.2 mm specimen, 50 mm/min test speed)	35	36
(s)	3.5.3.1 Elongation at Break, %, min (Test Method according to para 3.5.3)	6	9
(s)	3.5.4 Flexural Modulus, GPa, min (ISO 178, 80 x 10 x 4.0 +/- 0.2 mm specimen, 2 mm/min test speed, 64 mm support span)	1.90	2.3
	3.5.5 Shear Modulus at 23 °C, MPa (ASTM D 4065, forced constant amplitude, fixed frequency of 1 Hz +/- 15%, strain level below 1%. Specimen approx. 60 x 10 x 4.0 +/- 0.2 mm cut from the center of specimen A. Specimen length between clamps 35-40 mm. Soak time at each temperature interval - 3 minutes minimum)	790- -1200	820- -1220
(s)	3.5.6 Impact Strength, Izod, kJ/m ² , 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	13.4	17.4
	3.5.6.2 At -40 +/- 1 °C	3.3	4.8
	3.5.6.3 At -20 +/- 2 °C	4.7	7.0

Additionally, a Shear Modulus versus Temperature curve shall be plotted for -50 to +100 °C temperature range, at 5 °C minimum intervals. The plotted curve must be within tolerance range shown on page 5(A) and 6(A2).

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.