



ACETAL (POM) COPOLYMER, COLOR PIGMENTED MOLDING COMPOUND, MELT FLOW RATE 1.8 - 4.0, INTERIOR

WSB-M4D840-A4

1. SCOPE

The material defined by this specification is a thermoplastic acetal copolymer based on trioxane.

2. APPLICATION

This specification was released originally for material used for interior trim 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.

3.4 MOLDED TEST SPECIMEN

3.4.1 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

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.

3.4.2 Density 1.38 - 1.43 g/cm³
(ISO 1183, Method A)

3.4.3 Tensile Strength at Yield, min 58 MPa
(ISO R 527, 150 minimum x 10 x 4.0
+/- 0.2 mm specimen, 50 mm/min test speed)

3.4.3.1 Elongation at Break, min 10%
(Test Method according
to para 3.5.3)

Date	Action	Revisions
2006 04 13	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.8, 3.9 & 4
1995 06 12	Revised	Updated 3.8.1
1992 07 29	Released	NB00110043054195



M. Messerant
L. A. Graham
Documents
Document Sharing Hub



- 3.4.4 Flexural Modulus, min 2.4 GPa
(ISO 178, 80 x 10 x 4.0 +/-
0.2 mm specimen, 2 mm/min
test speed, 64 mm support span)
- 3.4.5 Shear Modulus at 23 °C 715 - 1073 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).

Additionally, a Shear Modulus vs. Temperature curve shall be plotted for -50 to +150 °C temperature range, at 5 °C minimum intervals. The plotted curve must be within tolerance range shown on page 5.

- 3.4.6 Impact Strength, Izod, min
(ISO 180/1A, 80 x 10 x 4.0
+/- 0.2 mm specimen, 10
specimens for each test)
- 3.4.6.1 At 23 +/- 2 °C 3.8 kJ/m²
- 3.4.6.2 At -40 +/- 2 °C 3.0 kJ/m²

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.

- 3.4.7 Heat Deflection Temperature, min
(ISO 75, 120 x 10 x 4.0 +/-
0.2 mm specimen, edgewise,
0.32 +/- 0.01 mm deflection)
- 3.4.7.1 At 1.80 MPa 87 °C
- 3.4.7.2 At 0.45 MPa 150 °C

- 3.4.8 Heat Aging Performance
(ISO 188, except 150 +/- 50 air
changes/h, 1000 h at 120 +/- 2 °C.
Unaged property values shall be
determined at the time of the
aged properties
determination)
- 3.4.8.1 Tensile Strength at Change +/- 25%
(Test Method per para 3.5.3)
- 3.4.8.2 Impact Strength, Izod Change +/- 25%
(Test Method per para 3.5.6.1,
specimens to be notched before
heat aging)

