



ACRYLONITRILE STYRENE ACRYLATE + POLYCARBONATE BLEND (ASA+PC), HIGH HEAT RESISTANT MOLDING COMPOUND, INTERIOR, METALLIC EFFECT

WSS-M4D682-A6

1. SCOPE

The material defined by this specification is a molding compound based on acrylonitrile-styrene-acrylate and polycarbonate.

2. APPLICATION

This specification was released originally for material used for unpainted molded in color, below the beltline, interior metallic applications such as shifter knobs and other various interior trim.

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

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).

3.1.1 All requirements of this specification, identified by symbol (s), shall be met with data representing 3 sigma values using latest ISO test methods. This specification is based on virgin material only. The use of in-house regrind is not allowed unless approved by Materials Engineering. If approved, the part must then be validated during PV testing with the documented level of regrind noted on the part drawing.

3.2 MOLDING COMPOUND

3.2.1 Melt Flow Rate, g/10 minutes 12.0 - 30.0
(ISO 1133, 265 °C, 5.0 kg)

The material shall be dried for 4 h minimum at 110 - 115 °C in a mechanical convection oven immediately preceding the test.

3.3 MOLDED TEST SPECIMEN

3.3.1 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 12	Activate	



Documents

M. Masserant



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.

3.3.2 Density, g/cm³ range (ISO 1183, Method A) 1.15 - 1.17

3.3.3 Tensile Strength at Yield, min (ISO R 527, 150 min x 10 x 4.0 +/- 0.2 mm specimen, 50 mm/minute test speed) 52 MPa

3.3.3.1 Elongation at Break, min (Test Method according to para 3.3.3) 23%

3.3.4 Flexural Modulus, min (ISO 178, Method I, Procedure A, 80 x 10 x 4.0 +/- 0.2 mm specimen, 2 mm/min test speed, 64 mm support span, the radius of the loading nose 5.0 +/- 0.1 mm and of the supports 2.0 +/- 0.2 mm) 2300 MPa

3.3.5 Charpy, notched, min (ISO 179/1eA, 80 x 10 x 4.0 +/- 0.2 mm specimen [use center section of specimen A], 10 specimens

3.3.5.1 At 23 +/- 2 °C, 7.0 kJ/m²

3.3.5.2 At -40 +/- 2 °C 3.8 kJ/m²

3.3.5.3 At 0 +/- 2 °C 6.0 kJ/m²

The test specimen must be conditioned for minimum of 6 hours at the above specified temperature prior to impact test. Low temperature testing shall be done within the cold chamber, if not possible, test may be conducted outside, but within 5 seconds.

3.3.6 Impact Strength, Izod, notched (Initial Qualification), min (ISO 180/1A, 80 x 10 x 4.0 +/- 0.2 mm specimen [use center section of specimen A], 10 specimens for each test)

3.3.6.1 At 23 +/- 2 °C, 7.0 kJ/m²

3.3.6.2 At -40 +/- 2 °C, 3.8 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, if not possible, test can be conducted outside, but within 5 s.