



POLYPROPYLENE (PP) SHEET, 50% WOOD FLOUR FILLED

WSK-M98D25-A

1. SCOPE

The material defined by this specification is an extruded 50% wood flour filled polypropylene sheet, which can be laminated with a suitable film.

2. APPLICATION

This specification was released originally for material used for various interior trim applications such as door trim panels.

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).

3.4 EXTRUDED SHEETS

3.4.1 Filler Content 42 - 50%
(Wood flour and nonextractable residue)

Test Method: FLTM AP 150-04 para 1 through 9 of procedure, except:

- use fritted glass filters
- solvent - 150 ml xylene
- duration of extraction - 24 h
- wash solvent for insoluble residue - 150 ml acetone
- drying period - 4 h at 100 +/- 2 °C
- cooling period - 15 minutes in desicator

Calculation:

% Nonextractables = Weight Residue x 100 /Weight Sample

3.4.2 Water Absorption, max 3%
(ISO 62, Method 1, except result shall be expressed as percentage)

3.5 TEST SPECIMEN

3.5.1 Preparation of Test Specimens

Unless otherwise specified all tests shall be carried out on test specimens machined from extruded sheets.

Date	Action	Revisions
2006 09 28	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.9, 3.10 & 4
1991 05 02	Released	EPOOEO1089484000



Documents

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The following dimensions are required:

- A. 150 min x 10 x 2.4 +/- 0.2 mm (Tensile Bar)
- B. 120 x 10 x 2.4 +/- 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 machined according to ISO 2818. No annealing allowed.

3.5.2 Density (ISO 1183, Method A/ASTM D 792, Method A1) 1.04 - 1.12 g/cm³

3.5.3 Tensile Strength at Max Load, min (ISO R 527/ASTM D 638, 150 min x 10 x 2.4 +/- 0.2 mm specimen, 5 mm/minute test speed)

Extrusion Direction (ED) 18 MPa
Across Extrusion Direction (AED) 12 MPa

3.5.4 Flexural Modulus, min (ISO 178/ASTM D 790, Method I, Procedure A, 60 x 10 x 2.4 +/- 0.2 mm specimen, 40 mm support span)

ED 3.0 GPa
AED 2.0 GPa

3.5.5 Shear Modulus at 23 °C (ED and AED) 0.94 - 1.6 GPa
(ASTM D 4065, forced constant amplitude, fixed frequency of 1 Hz +/- 15%, strain level below 1%. Specimen approx. 60 x 10 x 2.4 +/- 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.

3.5.6 Impact Strength, Izod, min (ISO 180, Method A/ASTM D 256, Method A, 80 x 10 x 2.4 +/- 0.2 mm specimen, 10 specimens minimum)

3.5.6.1 At 23 +/- 2 °C

ED 2.5 kJ/m²
AED 2.0 kJ/m²

3.5.6.2 At -40 +/- 2 °C

ED 1.5 kJ/m²
AED 1.0 kJ/m²