

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

FIBERBOARD (PANEL) - POLYETHYLENE LINED - FOAM CORE

ESB-M2E96-A

1. SCOPE

The material defined by this specification is a moisture resistant laminated panelboard with good formability and dimensional stability.

2. APPLICATION

This specification was released originally for material used as a headliner foundation for the 1977 Lincoln Versailles.

3. REQUIREMENTS

All values indicated for a test are for both perforated and unperforated panelboards, unless otherwise noted. Perforation pattern consists of 3.2 mm holes spaced 25 mm apart.

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).

3.2 CONSTRUCTION

- . Kraft paper liner/polyethylene/Kraft paper liner
- . Adhesive
- . Kraft paper/polystyrene foam core/Kraft paper
- . Adhesive
- . Kraft paper/polyethylene liner

The above components shall be laminated together with a suitable adhesive, then heat fused to provide a finished panelboard which shall show no evidence of delamination during any of the tests in this specification.

3.3 DIMENSIONAL STABILITY, max (SAE J 315, Methods "A" and "C")

Humidity ("A")	Heat ("C")
0.7%	-1.0%

3.4 IMPACT STRENGTH, min (ASTM D 3029, Procedure "B," average of 10)

0.68 J

3.5 THICKNESS (SAE J 315)

As specified on the engineering drawing

Date	Action	Revisions
2002 10 14	Revised	Updated and renumbered
1983 09 26	3.4,3.9,3.11	Revised - B4A-36026/CAN1-MF 504624-1
1977 05 03		Released AG1-6000-221

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3.6	DENSITY (SAE J 315)	208-224 kg/m ³
3.7	BURSTING STRENGTH, min (SAE J 315)	380 kPa/mm of thickness
3.8	TRANSVERSE STIFFNESS MODULUS, min (SAE J 949, except use peak load)	
	WMD	550 MPa
	AMD	275 MPa
3.10	WATER ABSORPTION, max (SAE J 315)	55 %
3.11	WARPAGE, max (SAE J 315)	
	Original	3 %
	Wet	4 %
	Dry	5 %
3.12	TENSILE STRENGTH, min (ASTM D 828)	
	WMD	158 N/mm
	AMD	79 N/mm
3.13	PLY ADHESION, min (FLTM BN 113-01)	4.45 N
3.14	FLAMMABILITY, max (FLTM BN 24-2, without the lot sampling plan)	101 mm/min

In addition, the test specimen shall not exhibit any flashing or sudden flaming on either surface in excess of the above max value.