

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

FELT, PAPER - HIGH ASPHALT SATURATION - SOUND DEADENER

**ESB-M2E70-A
ESB-M2E71-A**

1. SCOPE

The material defined by these specifications is a paper felt, highly impregnated with asphalt.

2. APPLICATION

These specifications were released originally for material used as a silencer for hood and deck lids.

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).

3.2 THICKNESS, AS RECEIVED, min

(ASTM D 461, except use 1 lb (454 g) load)

ESB-M2E70-A 0.100 in (2.54 mm)

ESB-M2E71-A 0.080 in (2.03 mm)

3.3 WEIGHT, min

(ASTM D 461)

ESB-M2E70-A 32 lb/100 ft² (1562 g/m²)

ESB-M2E71-A 24 lb/100 ft² (1172 g/m²)

3.4 ASPHALT CONTENT, based on dry paper felt weight

(ASTM D 461, carbon tetrachloride method)

70 – 125 %

3.5 WATER ABSORPTION

(SAE J 315)

15 – 50 %

Test Method: Absorption shall range from 15 - 50% average, based on minimum of 3 specimens. No one specimen shall exceed 55%, otherwise material shall be rejected.

Date	Action	Revisions
2002 10 15	Revised	Updated and renumbered
2002 03 28	Revised	Removed ESB-M2E70-B & ESB-M2E71-B D. Whyte
1963 06 12		Released ESB-M2E70-A & ESB-M2E71-A, AS1-927

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ESB-M2E70-A

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3.6 TENSILE STRENGTH, min
(ASTM D 461)

WMD	15 lb (66.7 N)
AMD	5 lb (22.2 N)

3.7 FLEXIBILITY AT 23 +/- 2 °C

No cracking when bent 180 ° around a 2 in (51 mm) mandrel.

3.8 STIFFNESS, max	WMD	AMD
ESB-M2E70-A	60	40
ESB-M2E71-A	75	55

Test Method: Tinius Olsen or equivalent, 1 x 3-1/2 in (25 x 89 mm) sample, 2 in (51 mm) span, 0.5 in/lb (0.06 J) total load, direct readout at 30° angle. Use 1.0 in/lb (0.12 J) total load for ESB-M2E71-A.

3.9 UNIFORMITY

On delaminating the felt, any unimpregnated area shall not exceed 5 % per ft² (0.093 m²) and no one spot shall exceed 1 in² (645 mm²).

3.10 ODOR

No disagreeable odor within the temperature range of -18 to 102 °C. Material that is considered to have a disagreeable odor by the Quality Control or product engineering office will be subject to rejection.

3.11 MILDEW RESISTANCE

No visual evidence of mildew growth and no mildew odor after 7 days exposure in a humidity cabinet controlled to 100% R.H. at 38 °C.

3.12 ESB-M2E70-A & ESB-M2E71-A FLAMMABILITY, max
(FLTM BN 24-2, without the lot sampling plan)

4 in (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.