



LAMINATE, ELECTRICAL INSULATION (0.13/0.05)

ESF-M3L89-A

1. SCOPE

The material defined by this specification is a composite of 100% rag paper and polyester film.

2. APPLICATION

This specification was released originally for material used as slot insulation in the alternator stator.

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 THICKNESS (ASTM D 374)

3.4.1	Total	0.17 - 0.20 mm
3.4.2	Nominal	
	100% rag paper	0.13 mm
	Polyester film	0.05 mm

3.5 BASIC WEIGHT, min (SAE J315)

204 g/m²

3.6 BURST STRENGTH, min (ASTM D 774)

1.3 g/mm²

3.7 DIELECTRIC STRENGTH, min (IEC 243/ASTM D 149, short time 6.35 mm electrode)

36 kV/mm

3.8 STIFFNESS IN FLEXURE, min (ASTM D 747, 12.7 mm span 0.11 Nm 60 deg)

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3.9 TENSILE STRENGTH, min (ASTM D 828)

WMD	19.6 N/mm
AMD	13.0 N/mm

Date	Action	Revision
2003 07 23	Revised	Para 3.0 inserted; Para 3.1, 3.2, 3.3, 3.12, 3.13, 4 deleted
1997 10 01	Revised	Revised para 3.5; Updated
1990 07 11	DE00E00107002060	Released





3.10 ELONGATION, min
(Test according to para 3.9)

WMD

11.25%

AMD

18.00%

3.11 TEAR STRENGTH, min
(ASTM D 689)

WMD

245 g/cm

AMD

288 g/cm