

TAPE, ROPE PAPER AND POLYESTER FILM - PRESSURE SENSITIVE
THERMOSETTING - ELECTRICAL

ESF-M3G39-A

1. SCOPE

The material defined by this specification is a flat, paper and polyester film tape with thermosetting, pressure sensitive adhesive.

2. APPLICATION

This specification was released originally for material used for electrical insulation in automotive assemblies, i.e. (a) coil ends on heater motor field coils; (b) sealing the mating line on heater motor cups, etc. The pressure sensitive properties of the adhesive assist in the assembly operations. The thermosetting properties prevent disintegration by effecting a cure to a permanent set with the heat from operation of the engine.

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).

3.2 CONSTRUCTION

The material shall consist of neutral kraft electrical grade paper and polyester film, coated on one side with a non-corrosive thermosetting and pressure sensitive adhesive.

3.3 THICKNESS 0.006 +/- 0.001 in
(ASTM D 1000) (0.15 +/- 0.03 mm)

3.4 BREAKING STRENGTH, min 30 lb/in (5.3 N/mm) width
(ASTM D 1000)

Ultimate Elongation, min 3.0%

Test Method: This shall be measured coincidentally with breaking strength.

$$\text{Ultimate Elongation} = \frac{L_2 - L_1}{L_1} \times 100$$

Where: L_1 = Original Length
 L_2 = Length at Break

3.5 DIELECTRIC STRENGTH AT 23 +/- 2 °C
(ASTM D 1000)

Total Thickness Reading, min 4000 V

Date	Action	Revisions
2005 09 19	Revised	Inserted 3.0; Deleted 3.1, 3.13, 4
1978 06 05		Metricated, Renumbered & Retyped CF4H-RD 567168-18
1963 06 25	Released	F6-1073



3.6 ADHESION TO STEEL, min (ASTM D 1000) 30 oz/in (328 N/m) width

3.8 ADHESION TO BACKING, min (ASTM D 1000) 30 oz/in (328 N/m) width

3.9 COPPER CORROSION
(FLTM BU 106-01)

No evidence of the characteristic green color of cupric chloride and/or the characteristic blue-black color of copper sulfide on the copper plates.

3.10 CHLORIDES, max (ASTM D 202) 64 ppm

3.11 pH
(ASTM D 202) 6.5 - 7.5

3.12 THERMOSETTING VALUE
(FLTM BU 107-01) 2 h at 0.5 kg