



TAPE, CLOTH BACKED FLAME RETARDANT, POLYMERIC COATED, WIRING ASSEMBLIES

WSS-M3G177-B

1. SCOPE

The material defined by this specification is a cloth backed, flame retardant, polymeric coated, one side pressure sensitive tape.

2. APPLICATION

This specification applies to material used as a wrapping for wiring assemblies, tape tie, and clip retainer in Body or Instrument Panel harness applications. The service temperature is 85 °C.

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 TAPE PROPERTIES (Initial and Annual Certification)

NOTE: Lot certification must include the requirements marked with (*). A certification must accompany each shipment per Lot Number.

3.4.1	Color*	Black or as specified on the engineering drawing
3.4.2	Tape Width Dimension	As specified on the engineering drawing
3.4.3	Thickness* (ASTM D 1000) (Tape plus adhesive)	As specified on the engineering drawing
3.4.4	Tensile Strength* (ASTM D 1000)	
	As received, min*	2.8 N/mm
	Aged, 3000 h at 85 °C	2.0 N/mm
3.4.5	Elongation* (ASTM D 1000)	
	As received, min*	5%
	Aged, 3000 h at 85 °C	5%

Date	Action	Revisions
2006 01 20	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 6
1996 05 30	Activated	



Documents

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- 3.4.6 Unwind Pull*, max .5 N/mm
(ASTM D 1000)

Test Method:

Test 30.5 m/minute on an unwind machine, measuring the unwind force parallel to the unwinding strip. The force measuring system shall have a sensitivity of 0.222 Newtons.

- 3.4.7 Adhesion to Steel*
(ASTM D 1000)

As received, min* .4 N/mm

- 3.4.8 Adhesion to Backing*
(ASTM D 1000)

As received, min* .17 N/mm

- 3.4.9 Flammability* 100 mm/min
(ISO 3795)

- 3.4.10 Dielectric Strength, min Must withstand
(ASTM D 1000) 1,000 V for 1 minute

- 3.4.11 Elmendorf Tear, max 1250 gm
(ASTM D 1424)

- 3.4.12 Resistance to Heat Aging

Take an appropriate length of tape and place it in a hot temperature oven at 100 +/- 2 °C for 7 days. Immediately after taking out the tape, wind it three times or more, half-lapped, around a 20 mm diameter mandrel. Examine to determine if it develops any cracks, tears, or brittleness.

- 3.4.13 Cold Flexibility

Take an appropriate length of tape and place it in a low temperature chiller at - 40 +/- 2 °C for 7 days. Immediately after taking out the tape, wind it three times or more, half-lapped, around a 20 mm diameter mandrel. Check to see if there are any cracks, tears, or brittleness.

- 3.4.14 Environmental Cycling

Prepare the test specimen as follows: Bundle 800 mm lengths of ten 20AWG-PVC (ESB-M1L120-A) and four 18AWG-PVC (ESB-M1L120-A), and wind the 19 mm wide tape in half-lap fashion around the wire bundle. Wind the prepared test specimen around an 80 mm diameter mandrel once, and place it in an environmental chamber. Subject it to the following environmental cycle:

24 h at 38 +/- 2 °C and 95 +/- 5% humidity
6 h at -35 +/- 2 °C
12 h at 98 +/- 2 °C
6 h at -35 +/- 2 °C
24 h at 38 +/- 2 °C and 95 +/- 5% humidity

