



TME 2011

PRODUCT STANDARD TME DIVISION, BHOPAL

TM 02351

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FLEXIBLE MICA PAPER TAPE AND SHEET, GLASS CLOTH ONE SIDE, POLYESTER FILM (MYLAR) ONE SIDE, HEAT RESISTANT RESIN

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1.0 Requirements:-

1.1 Mica Paper*:

- 0.0050" thick tape : To be .0025" \pm .0005" thick - Content to be 40% min. by Wt.
- 0.0075" thick tape : To be .004" thick - Content to be 50% minimum by weight.
- 0.0125" thick sheet : To be .0065" \pm .0005", - Content to be 50% minimum by weight.

*Continuous process mica paper, non-dehydrated type preferred.

1.2. Glass Cloth:

- 0.0050 thick tape : ECC 107, 0.0017" \pm .0005" - or
ECC 108, 0.0020" \pm .0005" thick
- 0.0075 thick tape) ECC 108, 0020" \pm .0005" thick
- 0.0125 thick sheet)

1.3 Polyester Film : 25 ga. (0.00025" thick) Mylar A or C -Tapes 200 ga (0.0020" thick) Mylar A or C - Sheet

1.4 Bond : To be flexible epoxy resin or polyester heat resistant resin. Cure to be sufficient to obtain maximum flexibility consistent with thorough bonding of mica paper to glass cloth and polyester film.

1.5 Make-up: Mica paper to have glass cloth one side, polyester film on other side of mica paper.

1.6 Dielectric strength: (ASTM D149-64**, Short Time, Average of 5 Tests)

Thickness	Inches	Dielectric Strength
0.0050	(Tape)	550 VPM, Minimum
0.0075	(Tape)	600 VPM, Minimum
0.0125	(Sheet)	500 VPM, Minimum

1.7 Tear strength: (ASTM D827-67** as amended herein)- Tapes Only

- a. Beam in stirrup to be rectangular steel 3/16" \pm .003" thick with edges rounded to 3/32" radius and set at 9^o angle from horizontal.
- b. 2" per minute crosshead speed.
- c. Centerline of tape aligned with direction of tensile stress and placed at center of blade with Mylar face in contact with blade.
- d. Tear Strength, pounds, minimum-----45.

Revision: 00	Distribution	Qty.	Approved: <i>M. Bhakta</i> (M. Bhakta)		
Date: 21/09/02	TAM QC-CIM TME CIM	1 1 1 1	Prepared: <i>(A.P. Samal)</i> (A.P. Samal)	Checked: <i>(A.P. Samal)</i> (A.P. Samal)	Date: 21/09/02



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PRODUCT STANDARD MATERIAL SPECIFICATION

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1.8 . Tolerances:

	<u>Tape</u>		<u>Sheet</u>
	<u>0.0050" Thick</u>	<u>0.0075" Thick</u>	<u>0.0125" Thick</u>
Thickness*-----	+0.001 - 0.0005	+ 0.001 - 0.0005	+0.001 - 0.0005"
Width-----	+ 1/64" from specified width.		

*Average, in accordance with NEMA Pub. MEI- 1965

1.9 Flexibility, Gurley : (1 x 3-1/2" Samples) at 25^oc.,max -- (Tapes Only)
0.0050" thick – 850
0.0075" thick – 1600

1.10 Rolls, Tapes: To contain the maximum lineal yards of tape on a 5" O.D. roll, unless otherwise specified on the engineering drawing. Tape to be wound at tension of 4 to 6 pounds on non-collapsing 1-1/2" I.D. cardboard or chipboard rolls with the glass side facing inward. No interleaving material allowable.

1.11 Splices, Tapes: 3 splices², maximum, per roll ; 12 feet minimum spliced length in any roll ; 8%, maximum, of rolls in any shipment may be spliced. Method of splicing: Overlap ends of tape 1/2", glass side up. Apply 2" pieced of .003" thick polyester film pressure sensitive tape centred longitudinally over the splices. Splice to adhere tightly enough to prevent failure during production application.

1.12 Marking & Handling: To be marked and handled in accordance with the requirements of A.I. 2113. Suppliers colour code to be visible on I.D. and O.D. of tape roll core. Manufacture date and lot number to be applied to I.D. of each roll. Roll container shall have following information thereon.

Manufacture
Date of Manufacture and lot Number
TM02351

Note: Packages containing spliced rolls must be so identified.

****Note :** Wherever the specification or test of any society is referred to herein with its date, number, or revision letter stated, no other dated or more recent revision are acceptable except by revision of this specification.

Note: An engineering approval of source is required for the purchase of this material.



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2.0 GENERAL INFORMATION : (Not Mandatory Vendor Requirements)

This specification covers an extremely flexible epoxy or polyester bonded mica paper tape and sheet for electrical application requiring excellent conformability and extreme heat stability. It is lower in cost than conventional mica glass tapes and sheet. The shelf life of this material is 2 months at 75°F

3.0 DRAFTING INFORMATION :

Where use of this material is specified, it shall be designed as :

Material : TM02351 MICA TAPE OR
TM02351 MICA SHEET

Note : These specifications were developed without considering whether patents may, or may not be involved. In all cases, therefore, the supplier shall be required to assume patent liability.

4.0 REFERENCE TO EMD STANDARDS:

This specification is identical to EMD Standard No. EMS 505.