



**SILICONE BONDED MICA PAPER TAPE WITH
POLYIMIDE BACKING**

1.0 GENERAL :

This specification governs the quality requirements of silicone resin bonded polyimide backed mica paper tape. The material shall be made from mica paper with a polyimide film backing adherent to one side and evenly impregnated with a B-Stage silicone resin. The tape shall have good winding property. It shall be possible to rewind the tape without any deterioration. The homogeneous insulation produced after pressing and curing shall have temperature index of at least 200.

2.0 APPLICATION :

Used as main armature coil insulation in class 200 insulated Traction Machines.

3.0 COMPLIANCE WITH NATIONAL STANDARDS :

There is no Indian Standard covering this material.

4.0 DIMENSIONS AND TOLERANCES :

4.1 Sizes :-

The thickness, width and length shall be as stated on the order.

4.2 Thickness :

4.2.1 Standard Thickness :

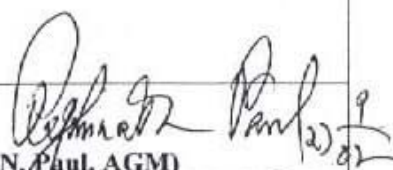
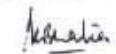
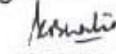
0.1 mm

4.2.2 Tolerance :

At each point : + 0.02
- 0.03

Average : + 0
- 0.02

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| | | | | | |
|------------------------------------|--------------|-----|---|---|------------------|
| Revision : 00 Date : 27.09.2002 | Distribution | Qty | Approved :  (R.N. Paul, AGM) | | |
| | CIM | 02 |  (S.K. Bhatia) Prepared |  (S.K. Bhatia) Checked | 27.09.02 Date |
| | TME | 01 | | | |



PRODUCT STANDARD
TME DIVISION, BHOPAL

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4.3 Width :

4.3.1 Standard Width :

19, 25 mm

4.3.2 Tolerance :

± 0.5 mm

4.4 Length/Roll :

30 m and 50 m.

However, for special applications, any other size may be ordered.

5.0 SHELF LIFE AND STORAGE :

At 25 ± 3 deg.C, 12 months, minimum.

6.0 TEST SAMPLE :

One roll of 30metre length shall be submitted for testing.

7.0 TEST METHODS :

Unless otherwise specified, all the tests shall be conducted as per the relevant methods of IEC/BIS.

8.0 BASIC MATERIALS :

Mica Paper :

The type of mica paper calcined muscovite with aramid fibrils used shall be disclosed to BHEL and prior approval obtained. Once approved, it shall not be changed without the concurrence of BHEL.

8.2 Silicone Resin :

The resin used for bonding shall be catalysed silicone of at least 200 temperature class as identified by Infra-Red spectrophotometer or any other standard method the grade of the resin and the supplier should be informed to BHEL.

8.3 Polyimide Film :

The polyimide film used shall meet the requirements of Plant Purchasing Specification.



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8.4 Composition :

| Weight gm/m ² | Mica content (%) | Binder Content (%) | Aramid Fibrids (%) |
|-----------------------------|---------------------|-----------------------|--------------------------|
| 120 ± 15 | 56 ± 4 | 10 ± 3 | 4 ± 1 |

9 PROPERTIES :

9.1 Substance (Weight) :

120 ± 15 gm/m²

9.2 Breaking Strength :

40 N/cm, Min.

9.3 Electric Strength (BDV) in air at room temperature (IS :2584) :

Average Value : 5.5 kV, Min.

Individual Value : 4.5 kV, Min.

10. TEST CERTIFICATE :

Unless otherwise specified, three copies of test certificates shall be supplied with each consignment.