



PLANT PURCHASING SPECIFICATION
BHOPAL

BP 27695

Rev. No. 02

PAGE 1 OF 3

SUPERSEDES
BP 27695 Rev.01

EPOXY - MICA (B-STAGE) PUTTY TAPE

1. GENERAL :

This specification governs the quality of B-staged epoxy mica putty in tape form. This is manufactured by impregnating mica with B- staged epoxy resin. The material has temperature index of at least 155 and good adhesion on metal surfaces.

2. APPLICATION :

Used for filling voids, hollow spaces and cavaties in electrical machines and sticking of top cheese to yoke in Shunt Reactors.

3. COMPLIANCE WIITH NATIONAL STANDARDS :

There is no Indian Standard covering this type of material.

4. DIMENSIONS AND TOLERANCES :

Thickness , Width and Length of the tape shall be as stated on the order.

4.1 Preferred thickness : 3 mm with tolerance of $\pm 10\%$.

4.2 Preferred Width : 30 mm with tolerance of $\pm 10\%$.

4.3 Length : A roll of 50 meter with tolerance of $\pm 10\%$.

5. TEST METHODS : As stated against each clause.

6. SAMPLE FOR TESTS :

A roll of 50 metre length shall be supplied for testing and approval.

7. SHELF LIFE :

At 20deg.C : 3 months minimum.

At 5 deg.C : 6 months minimum.

8. CHARACTERISTICS :

8.1 Density : 1.6 gm / cc, min.

Shall be determined by weight / volume method.

Revision :
Reviewed and Brought upto date

Issued by : *Sharda*
STANDARDS AND MATERIALS GROUP
TECHNICAL SERVICES DEPARTMENT

Rev. 02

Date :17.01.2008

Date of first Issue : May' 1993



TSD 6207 A

**PLANT PURCHASING SPECIFICATION
BHOPAL**

BP 27695

Rev. No. 02

PAGE 2 OF 3

8.2 Weight Loss (Cured) After 8 hours at 170 ± 2 deg.(Appendix – A) : 0.25% (Max.)

8.3 Bending Strength (Cured) : 80 MPa , Min.

Testing shall be done by any conventional method.

8.4 Composition (Appendix A) :

8.4.1 Mica content : 65, ± 5%, by wt.

8.4.2 Resin Content : 35, ± 5%, by wt.

8.5 Identification of Resin :

The resin used for impregnation when identified by Infra Red Spectro-Photometer or any conventional method shall confirm the presence of Epoxide Novalak.

9. TEST CERTIFICATE :

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

In addition, the supplier shall ensure to enclose one copy of test certificate alongwith their dispatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information :

BP 27695 : Epoxy - Mica (B-Stage) Putty Tape.
Rev.02

Our Order No.

Batch / Lot No.

Test values obtained / certificate for compliance for clause 4, 7 & 8.

10. PACKING AND MARKING :

The material shall be suitably packed to prevent contamination and damages during transit. In order to avoid any bonding between the layers, interleaving film / foil shall be used.

Each package shall be marked with the following information.

BP 27695 : Epoxy - Mica (B-Stage) Putty Tape

Our Order No.

Manufacturer's & / or Supplier's Name and Grade



TSD 6207 A

**PLANT PURCHASING SPECIFICATION
BHOPAL**

BP 27695

Rev. No. 02

PAGE 3 OF 3

Batch No. / Lot No.

Thickness, Width and Length }
Date of Manufacture / Expiry } } Shall be marked on each roll of tape

Quantity

APPENDIX-A**METHOD FOR THE DETERMINATION OF WEIGHT LOSS,
RESIN & MICA CONTENT****PREPARATION OF THE SAMPLE :**

Sufficient quantity of sample shall be first cut from the roll of tape and then the sample shall be cut into 30 mm x 10 mm size strips.

VOLATILE MATTER CONTENT:

About 10 g of the above prepared sample shall be weighed in a tared ignited 6 cm dia crucible (W_1), and shall be placed in an air circulating oven at $170 \pm 2^\circ \text{C}$ for 8 hrs. It shall then be cooled in a dessicator and then finally weighed. Loss in weight (L) shall be determined by subtracting final weight from the initial weight (W_1). Percentage loss in weight shall be calculated as given below :

$$\text{Loss in Weight (\%)} = \frac{100 \times L}{W_1}$$

BOND AND MICA CONTENT

The crucible and the contents from the above determination shall be heated over a low flame until the resin is reduced to carbon, taking care to prevent ignition. It shall then be transferred to a muffle furnace and shall be ignited at $500 - 600^\circ \text{C}$ for 1 hour and then allowed to cool in a dessicator and the weight of residue (W_2) shall be determined.

$$\text{Resin content (\%), on loss free basic} = \frac{(W_1 - L) - W_2}{W_1 - L} \times 100$$

$$\text{Mica content (\%) on loss free basic} = \frac{W_2}{W_1 - L} \times 100$$