

**WOVEN POLYESTER TAPE****1.0 GENERAL:**

This specification governs with the quality requirements of white, unvarnished polyester tape with woven selvages, which shall be uniform throughout and shall not be heat-sealed. The yarn used shall be polyester filament and the tape shall be woven firmly and uniformly in plain weave.

2.0 APPLICATION:

The material is used in the insulation of electrical machines.

3.0 COMPLIANCE WITH NATIONAL STANDARDS:

There is no national standard covering this material. However, assistance has been derived from the following national standard:
IS:5351-1975: Woven polyester tapes for electrical purposes.

4.0 DIMENSIONS AND TOLERANCES:**4.1 Sizes:**

The dimensions shall be as specified in BHEL order.

4.2 Tolerances:**4.2.1 Thickness:**

Thickness (mm)	Tolerance (mm)
0.08	± 0.01
0.13	± 0.01

4.2.2 Width:

Width (mm)	Tolerance (mm)
Upto 25	± 1.0
Above 25	± 1.5

Revisions :

Letter from HW

APPROVED :

INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (E)

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**4.3 Length:**

The length per reel : 50 m

5.0 TEST METHODS:

Unless otherwise specified, the tests shall be conducted as per IS:5351.

6.0 JOINTS:

There shall not be more than two joints in any roll. Adhesive tape may be used to fasten the ends of the tape. Pins and other metal devices shall not be used for fastening the ends.

7.0 PHYSICAL PROPERTIES:**7.1 Thread/Count:**

Nominal thickness, mm	Warp, cm	Weft, cm
0.08	30 – 32	18 - 20
0.13	40 – 42	16 – 18

7.2 Central thread:

A coloured thread shall be woven in the tape through out the length for indicating the centre of the width.

8.0 TYPE TESTS:**8.1 CHEMICAL PROPERTIES:**

pH value of aqueous extract : 7 - 10

Conductivity of the aqueous extract : 70 micro mhos/cm, max.

9.0 MECHANICAL PROPERTIES:

Breaking load:

Nominal thickness, mm, min.	Breaking load (kg/cm width), min.
0.08	8
0.13	12

10.0 THERMAL PROPERTIES:

Thermal shrinkage at $160^{\circ} \pm 2^{\circ}$ C for 15 minutes: 5 - 12 percent.



11.0 ACCEPTANCE CRITERIA:

Material shall be accepted on the basis of the following:

- a) Compliance certificate furnished by the supplier
- b) Test certificate furnished by the supplier and / or testing carried out at BHEL end.

12.0 TEST CERTIFICATES:

Unless otherwise stated, three copies of test certificates shall be supplied along with each consignment giving following information:

In addition, the supplier shall ensure to send one copy of test certificate along with the dispatch documents to facilitate quick clearance of the materials.

AA 237 01, Rev 03: Woven polyester tape

BHEL order No.

Manufacturers/suppliers Name:

Trade name/mark, if any:

Batch/Lot No.;

Test values obtained / certificate for compliance for physical, chemical, mechanical and thermal properties and dimensional tolerances as per the specification.

13.0 PACKING AND MARKING:

The tape shall be tightly wound in rolls of 50 m on hard tubes of equal width of the tape. The core shall not be loosened when the roll is dropped on floor from a height of one metre.

A set of 10 rolls shall be wrapped in polythene film and the sets packed in cases. The cases shall be marked with the following information:.

AA 237 01: Woven polyester tape

BHEL order No.

Manufacturers/suppliers Name:

Batch/Lot No.

Thickness and width

Quantity supplied

Date of manufacture

14.0 REFERRED STANDARDS (Latest Publications Including Amendments):

- 1) IS: 5351