



PLANT PURCHASING SPECIFICATION BHOPAL

BP 23795

REV NO. 07

PAGE 1 of 3

SHRINKABLE POLYESTER FABRIC TAPE

SUPERSEDES
BP 23795 Rev 06

1. GENERAL:

This specification governs the quality requirements of shrinkable unvarnished tape woven firmly and uniformly with selvages. The selvages shall be uniform throughout and shall not be heat sealed. Type of weaving shall be plain for thickness upto 0.2 mm, and twill for 0.25, 0.4 & 0.55 mm thickness.

2. APPLICATION :

Used as shrink tape in the insulation and bracing of large electrical machines.

3. COMPLIANCE WITH NATIONAL STANDARDS:

There is no Indian Standard covering this material.

4. DIMENSIONS AND TOLERANCES: The dimensions shall be as per our purchase order. Following are the preferred sizes :

4.1 Thickness :

Thickness & Tolerance:

Thickness (mm)	Tolerance (\pm) mm
0.12, 0.20, 0.25	0.02
0.40	0.05
0.55	0.10

4.2 Width: 6, 10, 15, 25 mm with a tolerance of ± 1.0 mm.

4.3 Length per roll : 50 meters

5. TEST METHODS :

Unless otherwise specified the tests shall be carried out in line with IS: 5351.

6. PHYSICAL PROPERTIES :

Revision : 0.55 mm thick X 6 mm width variant added

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TSD 6207A

**PLANT PURCHASING SPECIFICATION
BHOPAL**

BP 23795

REV NO. 07

PAGE 2 of 3

6.1 Thread density to which tapes shall be woven shall be as follows:

Thread Density			
Nom Thickness (mm)	Width (mm)	Warp (Ends)	Weft (Picks/cm)
0.12	15	36 - 42	14 - 16
	25	60 - 70	14 - 16
0.22	25	60 - 70	13x2 - 14x2
0.25	25	37 - 43	13 - 15
0.40	6	26 - 30	14x2 - 16x2
	10	35 - 40	14x2 - 16x2
	25	90 - 100	7x2 - 8x2
0.55	6	26 - 30	14x2 - 16x2

6.2 Substance : Substance of tape shall be as follows with a tolerance of $\pm 10\%$.

Thickness	Width	Substance (gm /100 meter length)
0.12	15	100
	25	165
0.20	25	350
0.25	25	430
0.40	6	175
	10	240
	25	560
0.55	6	360

7. CHEMICAL PROPERTIES:

7.1 pH Value of aqueous extract : 8 – 10

7.2 Conductivity of 1 % aqueous extract : 70 Micromhos /cm, Max.

8 MECHANICAL PROPERTIES :

8.1 Breaking load & Elongation :

Nominal Thickness mm	Nom Width mm	Breaking Load N. Min.	Elongation (%) (100 mm Gauge Length)
0.12	15	250	30, Min.
	25	400	30, Min
0.20	25	500	27, Min
0.25	25	1375	12-20
0.40	6	850	15, Min
	10	1100	15, Min
	25	3500	30, Min
0.55	6	850	15, Min

9 THERMAL PROPERTIES:

9.1 Thermal Shrinkage: The shrinkage shall be as specified below when tested on a length of 250 mm for 0.12, 0.2, 0.4 & 0.55mm thickness tape and 150 mm for 0.25mm tk. tape and recording the change in length after heating at $130 \pm 2^\circ \text{C}$ for one hour.



TSD 6207A

**PLANT PURCHASING SPECIFICATION
BHOPAL**

BP 23795

REV NO. 07

PAGE 3 of 3

Nominal Thickness mm	Nom Width mm	Shrinkage %	Load for shrinkage
0.12	15	6.0 Min	-
	25	6.0 Min	-
0.20	25	9.0 Min	-
0.25	25	5.5 - 8.0	850
0.40	6	9.0 Min	438
	10	9.0 Min	738
	25	9.0 Min	1825
0.55	6	9.0 Min	438

10. TEST CERTIFICATE :

Three copies of test certificate shall be supplied with each consignment, giving the information.

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

BP23795: Shrinkable polyester fabric tape.
Rev.07

BHEL order No.

Batch / Lot No.

Tests results obtained for physical, chemical, mechanical and thermal properties as the specification.

11. PACKING AND MARKING :

Tape rolls shall be wound tightly on rigid plastic bobbins of 40-50 mm I.D. Internal edges of the bobbin shall be rounded.

Rolls shall be packed in sealed wrappers and supplied in wooden boxes to prevent damage during transit. Each box shall be marked with the following information :

BP23795: Shrinkable polyester Fabric Tape.

BHEL Order No.

Manufacturer's and supplier's name and trade mark (if any).

Thickness, width & length.

Quantity.