



PLANT PURCHASING SPECIFICATION BHOPAL

BP 23790

Rev. No. 05

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SUPERSEDES
BP 23790 Rev.04

BRAIDED POLYESTER CORD

1. GENERAL :

This specification governs the quality of Braided Polyester Cord made from Polyester (Polyethylene Terephthalate) yarn.

2. APPLICATION : For use as tying and bracing material in electrical equipments.

3. COMPLIANCE WITH NATIONAL STANDARDS :

There is no Indian Standard covering this type of material.

4. DIMENSIONS AND TOLERANCES :

Diameter and length of the cord shall be stated on the order.

4.1 Preferred Diameter & Tolerances : 0.8, 1.5, 2.5, 3.6 mm with tolerance of $\pm 10\%$.

5. FREEDOM FROM DEFECTS : The cord shall be free from rips, knots, kinks or any other visual defect. It shall have a smooth surface.

6. TEST METHODS : Shall be in accordance with Annexure - A.

7. SAMPLE FOR TEST : 5 metre long cord shall be supplied for test and approval purpose.

8. PHYSICAL PROPERTIES :

8.1 Shrinkage for 24 hrs at 100 $\pm$ 2 Deg.C : 3 to 8%.

9. MECHANICAL PROPERTIES :

9.1 Breaking Load :

Cord Diameter (mm)	Breaking Load (N) Min.
0.8	200
1.5	400
2.5	1000
3.0	1300
6.0	2500

Revision : Reviewed & Brought upto date

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10. TEST CERTIFICATE :

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

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

The test certificate shall bear the following information :

BP 23790 : Braided Polyester Cord
Rev.05

Our Order No.

Batch / Lot No.

Test values obtained / certificate for compliance for clause 4, 8 and 9. The test certificate shall also contain construction of cord (No. of plaits / cm and No. of spindles) and the net weight of 100 m long cord.

11. PACKING AND MARKING :

Cord of one size shall be wound on one reel size limiting the weight of each wound reel to 2 Kg. The length of cord on each reel shall be as specified on the order. Each reel shall be wrapped in polythene and packed in wooden boxed with water-proof lining so as to prevent from contamination and damage during transit

Each package shall be marked with the following information.

BP 23790 : Braided Polyester Cord.

Our Order No.

Manufacturer's Name & Grade.

Diameter & Length.

Quantity / Net Weight.

Date of Manufacture / Expiry.

ANNEXURE - A

TEST METHODS

1. DIAMETER :

Wind ten turns of the cord on a mandrel of 5 to 10 mm diameter, in a spiral fashion, keep the tension adequate for a close winding while taking care to avoid overlap. Measure the length of the wound portion, by a vernier caliper to an accuracy of 0.1 mm and calculate the diameter by dividing this by the number of turns.

2. SHRINKAGE :

Take a cord length of 300 mm, mark 250 mm in the middle portion. Attach a tension weight of 5 grams at one end of the cord. Hang the cord by the other end in an oven, maintained at 100 ± 2 deg.C for 24 hours. Take out the cord and measure the change in length of the marked portion of the cord.

3. BREAKING LOAD :

The Breaking load is determined on a testing machine of 1 % accuracy within the test range. The rate of movement of the lower grip shall be fixed at 50 mm/min. The length of the cord between the grips shall be set at 200 mm. In case of premature rupture inside the grips, the specimen shall be prepared and tested in a special manner described below.

Prepare from the polyester cord a ring specimen of perimeter 300 mm joining the two ends of the cord by twisting together and binding the joint suitably by cotton cord and impregnating it, if necessary. Test the specimen, keeping the rate of movement of lower grip as 50 mm/min, on special grips intended for the tensile testing of ring specimens of rubber (IS:3400-Part I).

Arithmetic mean of breaking loads of 5 specimens, ruptured outside the grips joint shall be taken as the breaking load of polyester cord. It is allowed to report the breaking load as "obtained value" in case of rupture inside the grip, when the value obtained in this manner is more than the specified value.