



CORPORATE PURCHASING SPECIFICATION

AA 256 01

Rev. No. 01

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GLASS FIBRE WOVEN CLOTH

1.0 GENERAL:

This specification governs the quality requirements of Loom state Glass Fibre Cloth, woven plain from continuous filament yarn of type E, low alkali glass.

2.0 APPLICATION:

Used in the manufacture of composite insulation of electrical machines.

3.0 COMPLIANCE WITH NATIONAL STANDARDS:

There is no national standard covering this material. However, assistance has been taken from "BS 3396, Part I: Woven glass fibre fabrics for plastics reinforcement-Loom state fabrics and IS:5352: Glass fibre woven tape for electrical purposes", in preparation of this specification.

4.0 DIMENSIONS AND TOLERANCES:

Thickness, width and length /roll shall be as stated on BHEL order.

4.1 Thickness: See Annexure -I

4.2 Width:

The standard widths are 450, 700, 915 and 1000mm with tolerance of ± 10 mm. However, any other width can also be ordered.

4.3 Length:

Unless otherwise specified, the fabric shall be supplied in continuous length of not less than 100 metres.

5.0 SAMPLE FOR TEST:

2 sq.metre of required thickness shall be sent for test and approval purposes.

6.0 TEST METHOD:

Unless other wise specified, the tests shall be conducted as per IS:5352.

7.0 PHYSICAL PROPERTIES:

7.1 Finish:

Shall be smooth and uniform, free from yarn defects and defect of weaving, streaks, stains, oil and grease spots, creases, wrinkles etc.

7.2 Texture: See Annexure - I

Other constructions may also be accepted against particular thickness, provided the cloth complies with all other characteristics specified in this specification.

Revisions :

Cl: 32.4.68 of MOM of MRC-E

APPROVED :

INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (E)

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7.3 Subatance: See Annexure - I

8.0 MECHANICAL PROPERTIES:

8.1 Breaking Strength:

8.1.1 As received: See Annexure - I

8.1.2 After ageing at 250⁰C for 24 hrs:

The reduction shall not be more than 50% of the value in as received condition.

9.0 CHEMICAL PROPERTIES:

9.1 Glass Content: 98.5%, min.

10.0 TYPE TEST:

10.1 Conductivity of 1%aq. Extract: 70 micromhos /cm, max

10.2 pH of 1% aq. Extract: 8 to 10.

Note: Periodicity is once in two years or whenever there is a change in source or grade.

11.0 TEST CERTIFICATES:

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

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

The test certificate shall bear the following information:

AA 25601 (Rev.No 01): Glass- Fibre Woven Cloth.
BHEL Order No.
Batch/Lot No.
Test values obtained / certificate for compliance of clauses 7 to 9, specifying the yarn count, actually used by the supplier.

12.0 PACKING AND MARKING:

The fabric shall be rolled evenly on tubes of sufficient length and strength to produce a firm package so as to prevent collapsing or telescoping during transit, storage and handling. Both ends of the roll shall be suitably protected to prevent damage to the edges of the cloth. Each roll shall be individually wrapped and rolls of fabric shall be securely packed in parcels or boxes in such a way as to protect them from damage.

Each roll of fabric and package shall be marked with the following information:
A 25601: Glass fibre woven cloth.
BHEL order No.
Manufacturer's / Supplier's Name and grade.
Batch/Lot No.
Thickness, Width & Length
Test certificate reference..

13.0 REFERRED STANDARDS (Latest Publications Including Amendments):

1) IS:5352 2) BS 3396, Part 1



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ANNEXURE - I

Nom. Tkns.	Tolerance on Thickness	Recommended BS: Designation	Substance (average)	Thread count (average) Nos. /10 cm	Yarn Count (nominal)	Breaking Strength (average) Kgf/cm, Min.	
(mm)	(mm)		(g/m ²)	Ends/Warp Picks/Weft	Warp Tex Weft Tex	Warp Weft	
0.025	+ 0.002	-	24 + 2	250 + 6	235 + 6	2.8-2/0 2.8-2/0	7.2 3.6
0.043	+ 0.004	-	37 + 4	216 + 5	212 + 5	5.5-1/2 5.5-1/0	8.3 4.0
0.05	+ 0.005	P32/11	50 + 5	252 + 6	181 + 5	11 -1/0 11 -1/0	9.7 7.0
0.08	+ 0.008	P 2/11	100 + 10	252 + 6	173 + 4	11 -1/2 11 -1/2	19.5 13.5
0.10	+ 0.010	P36/33	125 + 13	252 + 6	158 + 4	33 -1/0 33 -1/0	12 10.5
0.125	+ 0.012	-	200 + 20	165 + 4	126 + 3	11 -1/3 11 -1/2	29 12
0.18	+ 0.018	P41/66	300 + 30	118 + 3	100 + 3	66 -1/0 66 -1/0	30 23
0.255	+ 0.025	-				22 -2/3 22 -2/3	50 40

Note: There shall be no minus tolerance on the above breaking strength.
A tolerance of - 20 percent shall be permitted on individual values.