



PLANT PURCHASING SPECIFICATION BHOPAL

BP 12399

REV NO. 08

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SUPERSEDES
BP 12399 Rev 07

ALUMINIUM FOIL-HIGH

1. GENERAL :

This specification governs the quality requirements of high grade pure Aluminium Foil.

2. APPLICATION : For the manufacture of Electrical Power Capacitors.

3. COMPLIANCE WITH NATIONAL STANDARDS :

Supplied in Reels. The foil shall be wound on tubes of Steel or Aluminium of internal diameter 76 mm nominal and wall thickness 1.5 mm approximately. The width of the tube shall be same as that of foil. The maximum diameter of the reel shall be 165 mm. The foil shall be evenly wound on the reel so that it shall unwind freely without tears across the web. Any joint shall be made mechanically and not chemically.

4. COMPLIANCE WITH NATIONAL STANDARDS :

There is no Indian Standard covering this type of material.

5. DIMENSIONS AND TOLERANCES :

5.1 Thickness : 0.005 mm, 0.0055 mm, 0.006 mm & 0.100 mm.

5.2 Tolerance :

5.2.1 Thickness : $\pm 10\%$ when calculated from the weight of 3 metres of foil of which the density is 2.7 gms/cc.

5.2.2 Width : ± 0.4 mm.

6. FREEDOM FROM DEFECTS :

The foil shall be clean, free from wrinkles, uncontaminated with oil, grease and any other imperfections.

7. CHEMICAL COMPOSITION :

The chemical composition of Aluminium Foil shall be as follows :

Aluminium	99.35 Min.
Total Impurities including Iron & Silicon	0.65% Max.

Revision :

Reviewed & No Tech. Change

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8. TEST SAMPLES :

One sample per thickness, per consignment shall be selected for test.

9. PHYSICAL TEST :

9.1 Wettability :

The surface of the foil shall be completely wettable from edge to edge by distilled water and the test shall be performed as described below:

A length of approximately 600 mm of the foil shall be suspended over a horizontal bar so that the edges are vertical.

A fine jet of distilled water shall be directed over the foil, so that the whole surface (including edges) is wetted.

After drainage, period of 10 seconds, the foil shall appear to be uniformly wetted from edge to edge.

A second sample from the same reel shall be taken for examination of the other side of the foil.

9.2 Covering Capacity - The foil shall have a covering capacity of :-

0.005 mm	66 —80 Sq Metres per Kg.
0.0055 mm	60 -73 Sq Metres per Kg.
0.006 mm	55 -66 Sq Metres per Kg.
0.100 mm	3.3-4.0 Sq. Metres per Kg.

10. MECHANICAL PROPERTIES : Tensile Strength : 2.8 g 1micron / mm width (min.)

11. TEST CERTIFICATE :

Unless otherwise stated three copies of test certificates shall be supplied.

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

The test certificate shall bear the following information.

BP 12399 (Rev.08) Aluminium foil - High Purity BHEL Order No.

Manufacturer's/Supplier's Name.

Consignment/identification No.

Batch No.

Results of Tests:

Results of Chemical Analysis, Physical , Mechanical Tests & Dimensional Tolerances as specified in this specification.

12 PACKING AND MARKING :

The material shall be suitably packed as detailed in Annexure - I.

The reels shall be packed rigidly to packing cases in such a manner that no mechanical damage and no deterioration can occur due to weather condition/exposure of storage in transit.

Each package shall be legibly marked with the following information

BP 12399:

BHEL Order No.

Manufacturer's/ Supplier's Name.

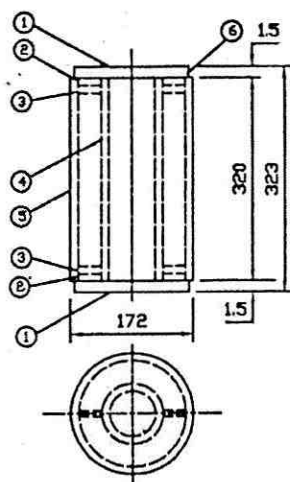
Batch No.

Identification Mark / No. & Date of Manufacture.

Weight.

ANNEXURE— 1

PACKING CASE FOR ALUMINIUM FOIL



NOTE :- ITEM No. 1 TO BE FIXED WITH ADHESIVE TAPE TO
AVOID INGRESS OF WATER AND DUST
- ALL DIMENSIONS ARE IN MM.
- NOT TO SCALE

ITEM No.	DESCRIPTION
1	HARD PRESS BOARD
2	FLEXIBLE PRESS BOARD LAMINATES
3	THERMO COLE
4	HARD PRESS BOARD
5	HARD PRESS BOARD
6	ADHESIVE TAPE

