



TSD 6206 A

**PLANT PURCHASING SPECIFICATION**  
**BHOPAL**

BP 12389

Rev. No. 03

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SUPERSEDES  
BP 12389 Rev 02

ALUMINIUM FOIL

**1. GENERAL:**

This specification governs the quality requirements of 0.025 mm & 0.018 mm Aluminium Foil.

**2. APPLICATION:**

For use as condenser layers in the primary windings of Instrument Transformers.

**3. COMPLIANCE WITH NATIONAL STANDARDS:**

There is no Indian Standard covering this material.

**4. DIMENSIONS AND TOLERANCES:**

**4.1 Thickness:**

0.025, mm and 0.018 mm.

The tolerance on thickness shall be  $\pm 10\%$ .

**4.2 Width:**

As stated on our order.

The tolerance on width shall be  $\pm 1.6$  mm.

**5. COVERING CAPACITY:**

13 to 16 sq.m/kg for 0.025 mm thick.

18 to 22 sq. m/kg for 0.018 mm thick.

**6. STRAIGHTNESS:**

Edges of foil in coil, shall not vary from a straight line by more than 10 mm in any 750 mm length.

**7. FINISH:**

Both surfaces of foil shall be completely wettable with distilled water.

Revision : Brought upto date.

Issued by : *[Signature]*

STANDARDS AND MATERIALS GROUP  
TECHNICAL SERVICES DEPARTMENT

Rev. No. : 03

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## 8. FREEDOM FROM DEFECTS:

Clean, free from wrinkles, uncontaminated with oil, grease and any other imperfections.

## 9. CHEMICAL COMPOSITION:

The chemical composition of Aluminium Foil shall be as follows:

Element	Percent
Aluminium	99.0 Min.
Combined iron, silicon & other impurities.	1.0 Max.

## 10. TEST SAMPLES:

One sample per size, per roll, per consignment shall be selected for test.

## 11. PHYSICAL PROPERTIES:

The foil should unroll evenly and freely from the rolls without sticking, breaking, buckling or tearing across the web.

## 12. RETESTS:

Should any of the test samples first selected fail to pass the prescribed tests, two further samples from the same batch shall be selected for testing. One of which shall be from the foil from which original test sample was taken.

Should the test samples from both these additional samples pass, the batch represented by the test samples shall be deemed to comply with this specification. Should the test samples from either of these additional samples fail, the batch represented by the test samples shall be deemed not to comply with this specification.

## 13. INSPECTION AT SUPPLIER'S WORK:

Tests and inspection are to be conducted in the presence of the customer's representative. The representative shall have free access at all times while the work on the contract is being performed, to all parts of the manufacturer's work. The supplier shall offer the purchaser's representative all reasonable facilities, without charge to satisfy the latter that the material is being furnished in accordance with the specification. The supplier shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities are not available at his works, the supplier shall make necessary arrangements for carrying out the prescribed tests elsewhere.



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## 14. TEST CERTIFICATE:

Unless otherwise stated, three copies of test certificate shall be supplied giving the following information.

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

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BHEL Order No.

Manufacturer's/Supplier's Name.

Batch No.

Consignment/Identification No.

Results of Tests

Results of chemical composition, physical properties and dimensional tolerances as specified in this specification.

## 15. PACKING AND MARKING:

The foil shall be wound in a continuous length on metal tubes having 60 mm ID and 0.8 mm thickness approximately. The OD of the rolls shall not exceed 150 mm.

The rolls of foil shall be packed in damp proof packing to avoid ingress of moisture and oxidation.

All rolls must be packed suitably to prevent damage in transit and marked with the following information.

BP 12389 : Aluminium Foil.

BHEL Order No.

Manufacturer's/Supplier's Name.

Date of manufacture and/or identification no.

Nominal thickness and width of, the aluminium foil.

When packed, the outside of the packing cases shall also be marked with the above details.

The inner core shall bear the following information.

The manufacturer's name or trade mark for identification.

Batch or Identification No.



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**16. REJECTION AND REPLACEMENT:**

If the material does not comply with the requirements of this specification during receipt inspection at BHEL or if any defect is found during further processing of the material, BHEL reserves the right to reject the whole consignment and the supplier shall replace the material free of cost.