

BUREAU OF INDIAN STANDARDS
CENTRAL MARKS DEPARTMENT – III

Our Ref: CMD-III/16:15652

28 June, 2007

**Subject: Implementation of revised Indian Standard Specification for
Insulating mats for electrical purposes-IS 15652:2006 (superseding IS
5424:1969)**

Indian Standard specification for Insulating mats for electrical purposes IS 15652: 2006 –(superseding IS 5424:1969) has been published. The objective of this standard is to take care of the technological advances and developing consumer needs in the field of insulating mats for electrical purposes. While incorporating practices and experiences of the Indian industry, the standard is on the line of relevant IEC 61111-2002-06 Matting of insulating materials for electrical purposes and sampling plans have been adapted from therein and align with International practices.

The published specification along with its draft STI was circulated vide CMD Note of even number dated 9 January 2007 for seeking comments of ROs/BOs. Some comments were received and changes have been made to draft STI.

STI has been finalized as DOC: STI/15652/1, November 2007 (available on BIS Intranet). In order to implement, revised standard and Scheme of Testing and Inspection following procedure shall be adopted:

For existing licensee:

1. Concerned BO to verify the testing facility of the product as per IS 15652:2006 (refer Annex D) and obtain the declaration on CMD/PF 306. Factory testing shall be carried out during routine periodic inspection to check the workability of the test equipment as well as competency of the testing person.
2. Endorsement in the licence for change over to the new standard shall be made after obtaining the following documents from the licensees:
 - a) Declaration regarding testing capability as per IS 15652:2006 on CMD/PF 306.
 - b) Test report (Factory tests /Independent tests) indicating conformity of the product toIS 15652:2006.
 - c) Acceptance of revised STI.
3. Action shall be taken as per OMPC 2004, if the licensee fails to submit the acceptance of STI in stipulated time.

For Applicants:

1. During the period up to 31 Oct,2007 applications may be recorded and processed for GOL as per IS 5424:1969 . An undertaking may be obtained from the firm that the action required for switchover to IS 15652 :2006 shall be completed before 1st November 2007.

IS 15652:2006 AND STI Doc:STI/15652/1, November 2007 WILL BE IMPLIMENTED WITH EFFECT FROM 1st November 2007.

All ROs/BOs are requested to take necessary action. STI can be downloaded from BIS Intranet.

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Circulated to all RO's/BO's/IO's/BIS labs

Copy to: ETD- with a request to arrange for Gazette Notification w.e.f. 1st November, 2007.

**SCHEME OF TESTING AND INSPECTION
FOR CERTIFICATION OF
INSULATING MATS FOR ELECTRICAL PURPOSES
ACCORDING TO IS 15652:2006**

1. LABORATORY – A laboratory shall be maintained which shall be suitably equipped and staffed where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

2. TEST RECORDS - All records of tests, inspection and calibration shall be kept in suitable forms approved by the Bureau.

2.1 All testing apparatus/measuring instruments shall be periodically checked and calibrated and records of such checks/calibration shall be maintained.

2.2 Copies of any records and other connected papers that may be required by the Bureau shall be made available at any time on request.

3. QUALITY CONTROL – It is recommended that, as far as possible, Statistical Quality Control (SQC) methods may be used for controlling the quality of the product during production as envisaged in this Scheme [See IS 397(Part I): 2003 to IS 397(Part 4): 2003].

3.1 In addition, effort should be made to gradually introduce a Quality Management System in accordance with IS/ISO 9001.

4. STANDARD MARK – The Standard Mark, as given in Column (1) of the First Schedule of the licence, shall be applied on each roll/flat provided always that the roll/flat to which the mark is thus applied conforms to every requirement of the specification.

4.1 **OTHER MARKINGS** - The following information shall also be furnished on each roll/flat.

- a) Class,
- b) Manufacturer's identity.,
- c) Lot No (Control unit no.),
- d) Roll No.,
- e) Licence No., (i.e CM/L....)

4.2 **PACKING** - The mats shall be packed either in rolls or flats as per clause 10 of IS 15652: 2006

5. LEVELS OF CONTROL - The checks and tests, as indicated in Table 1 attached and at the levels of control specified therein, shall be carried out on the whole production of the factory which is covered by this scheme and appropriate records maintained in accordance with paragraph 2. above. All the production that conforms to the Indian Standard and covered by the licence shall be marked with certification mark of the Bureau.

5.1 **Control unit** – For the purpose of the scheme all roll/ flat of the same class and category manufactured out of the same elastomer at a time and vulcanized simultaneously shall constitute a control unit.

5.2 Composition –The insulating mats shall be made from the material – elastomer, free from any insertions leading to deterioration of insulating properties.

5.2.1 Upper surface of insulating mats shall have small aberration (rough surface without edges) to avoid slippery effects while the lower surface shall be plane or could be finished slip resistant without affecting adversely the dielectric property of the mat .

5.3 The colour shall be as agreed between the purchaser and the supplier. However no colour with metallic derivatives shall be used.

5.4 In respect of all other clauses of the specification the factory will maintain appropriate control and checks to ensure that their product conforms to the various requirements of this specification.

6. REJECTIONS – A separate record shall be maintained giving information relating to the rejection of the production not conforming to the requirements of the specification and the method of its disposal. Such material shall in no circumstances be stored together with that conforming to the specification.

7. SAMPLES – The licensee shall supply, free of charge, the samples required in accordance with the Bureau of Indian Standards (Certification) Regulations, 1988, as subsequently amended, from the factory or godown. The Bureau shall pay for the samples taken by it from the open market.

8. REPLACEMENT – Whenever a complaint is received soon after the goods with Standard Marks have been purchased and used, and if there is adequate evidence that the goods have not been misused, defective goods or their components should be replaced or repaired free of cost by the licensee in case the complaint is proved to be genuine and the warranty period (where applicable) has not expired. The final authority to judge the conformity of the product to the Indian Standard shall be with the Bureau.

8.1 In the event of any damages caused by the goods bearing the Standard Mark, or claim being filed by the consumers against BIS Standard Mark and not “conforming to” the relevant Indian Standard, entire liability arising out of such non conforming product shall be of licensee and BIS shall not in any way be responsible in such cases.

9. STOP MARKING – The marking of the product shall be stopped under intimation to the Bureau if, at any time, there is some difficulty in maintaining the conformity of their product to the specification, or the testing equipment goes out of order. The marking may be resumed as soon as the defects are removed under intimation to Bureau.

9.1 The marking of the product shall be stopped immediately if directed to do so by Bureau for any reason. The marking may then be resumed only after permitted by the Bureau. The information regarding resumption of markings shall also be sent to the Bureau.

10. PRODUCTION DATA – The licensee shall maintain records of production, quantity marked and the details of the purchasers and the same shall be made available to BIS on request. The details as per the enclosed proforma-1 to be authenticated by a Chartered Accountant or by the manufacturer by giving an affidavit/undertaking may be sent .

IS 15652 :2006
INSULATING MATS FOR ELECTRICAL PURPOSES
TABLE 1 LEVELS OF CONTROL
(Para 5 of Scheme of Testing and Inspection)

TEST DETAILS				LEVELS OF CONTROL		
Clause	Requirement	Test Methods		No. of samples	Frequency	Remarks
		Sub Clause	Reference			
6.1	Shape	6.1	IS 15652: 2006	All	Each Control unit	
6.2	Dimensions& Tolerances	6.2& 6.2.1	IS 15652: 2006	5	-do-	
6.3	Thickness	Table2 Annex C-1	IS 15652: 2006	5	-do-	
7	Work man ship and finish	7.1	IS 15652: 2006	All	-do-	
8.1	Tensile Strength and Elongation at Break	C-2, Table3	IS 15652: 2006	2	-do-	
8.2.1	Insulation Resistance with water	C-3.1	IS 15652: 2006	2	-do-	
8.2.2	Leakage current	C-3.2	IS 15652: 2006	2	-do-	
8.2.3	ac Di-electric Strength	C-3.3&5.1.1 7.2.1& 8 of IS 2584	IS 15652: 2006	2	-do-	
8.2.4	ac proof voltage	C-3.4, Table5	IS 15652: 2006	2	-do-	
8.3	Ageing Properties	C-4	IS 15652: 2006	1	Every 7 th Control unit	Please See NOTE 1
8.4.1	Flame Retardance	C-5.1	IS 15652: 2006	2	Each Control unit	
8.4.2	Low Temperature Resistance	C-5.2	IS 15652: 2006	2	-do-	
8.5	Acid and Oil Resistance	C-6,	IS 15652: 2006	2	Every 3 rd Control unit	Please See NOTE 1
8.6	Extreme low Temperature	C-7	IS 15652: 2006	2	-do-	-do-

NOTE 1 :In case a sample fails in the requirement, the marking that type of Insulating mat shall be suspended. Thorough investigation of the failure shall be made and defect rectified .The marking shall only be resumed when the samples of that type produced show conformity to these requirements. The original frequency shall be restored when five samples taken from each five consecutive control units shows conformity to the requirements.

NOTE 2 : Either test 8.4.2 or test 8.6 shall be used, according to the special properties of the mat

PERFORMA - 1

PROFORMA FOR OBTAINING QUARTERLY PRODUCTION DETAILS

Period covered *

Name of Licensee

CM/L No.

Name of Articles (s)

IS No.

Grade/Type/Size

1.1 Brand/Trade/Name(s) of BIS Certification Marked Products

2. Total production of the articles(s) licensed for certification marking

2.1 Total production of the article(s) conforming to Indian Standard

3. Production covered with BIS Certification Mark and its value

a) Quantity (tonne)

b) Invoice sale price

3.1 Brand Name used on production covered under BIS Certification Mark

3.2 Calculation of marking fee as per agreed Rate of Marking Fee

a) Unit

b) Quantity covered with BIS Certification Mark

***Information to be filled up by BO before forwarding to the licensee.**

Note : In case a clause is not applicable, suitable remarks may be given against it.

c) Marking fee rounded off in whole rupees as obtained by applying unit rates given in (a) on quantity given in (b)

4. Quantity not covered with BIS Certification Mark. If any, and the reasons for such non-coverage

4.1 Brand Name under with non certified goods were sold

5.0 Quantity Exported with BIS Standard Mark and its value

5.1 Brand Name under which BIS Certified goods are exported

6.0 Authentication by Chartered Accountant

**Signature of Authorised Signatory
Name
Date**