



उत्पाद मैनुअल
टिन और टिन - लैड लेपित कॉपर तार - विशिष्टि (पहला पुनरीक्षण)
आई एस 9567 : 2001 के अनुसार

PRODUCT MANUAL
TIN OR TIN - LEAD COATED COPPER WIRE - SPECIFICATION (FIRST REVISION)
ACCORDING TO IS 9567 : 2001

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना- I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या IS No.	:	IS 9567 : 2001
	शीर्षक Title	:	TIN OR TIN - LEAD COATED COPPER WIRE - SPECIFICATION (FIRST REVISION)
	संशोधनों की संख्या No. of amendments	:	NIL
2.	नमूना दिशानिर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	CI 4.1 Annealed copper CI 4.3.1 Tin (grade 99.75) (If applicable) CI 4.3.2 Tin-Lead Alloy (If applicable)
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer ANNEX – A

c)	नमूने का परिमाण Sample Quantity	:	6 Meters (finished Product) + Raw Material (2 Meters annealed copper, 200 gms of Tin/ Tin-Lead Alloy)
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer ANNEX – B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	एक दिन में संभावित परीक्षण Possible tests in a day:	:	Please refer ANNEX-D
6.	लाइसेंस का दायरा /Scope of the Licence	:	
	Licence is granted to use Standard Mark as per IS 9567 : 2001 with the following scope:		
	Name of the Product		TIN OR TIN - LEAD COATED COPPER WIRE - SPECIFICATION (FIRST REVISION)
	Variety		TIN COATED COPPER WIRE/ TIN - LEAD COATED COPPER WIRE
	Nominal Size (Diameter)		___ mm

ANNEX – A

समूहीकरण दिशानिर्देश **Grouping Guidelines**

The following grouping guidelines shall be followed for Grant of Licence/Change in scope of licence for Tin or tin-lead coated copper wire — Specification as per IS 9567 : 2001.

- 1) Manufacturer shall declare the variety (TIN COATED COPPER WIRE/ TIN - LEAD COATED COPPER WIRE) and the nominal size (diameter) of the wire manufactured by them.
- 2) For Grant of Licence/ Change in Scope of Licence a sample of the highest nominal size (diameter) of each type of coating shall be tested.
- 3) The Firm shall declare the varieties of tin or tin-lead coated copper wire they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing capability and testing facilities of the Manufacturer.
- 4) During the operation of the Licence, BO shall ensure that all the models covered in the Licence are tested in rotation to the extent possible.

ANNEX – B

परीक्षण उपकरणों की सूची

List Of Test Equipment***(INDICATIVE LIST, FOR GUIDANCE ONLY)******Major test equipment required to test as per the Indian Standard***

Sl. No.	Tests Used In With Clause Reference	Test Equipment/Chemical
1.	Marking	Petroleum Spirit, cotton swab
2.	Measurement of diameter (6.4.1)	Micrometer
3.	Resistance test (6.3.1)	Kelvin Double Bridge with galvanometer, D.C. Source
4.	Elongation and breaking strength test (6.4.2)	Tensile Testing Machine, Steel Scale, Vernier Caliper, Micrometer, Conditional chamber with temperature controller, Hour Meter
5.	Bend test (6.4.3)	Bending Tester
6.	Solderability test (6.4.4)	Hot Air Oven, Solder Bath, Test Pattern holder, Stop watch, Solder, Flux,
7.	Continuity of coating test (6.4.5 & Annex C)	Benzene/ trichloroethylene, Soft cloth, Hydrochloric Acid Solutions Sp gr 1.088, Sodium Polymdphide Solution Sp gr 1.142, distilled water
8.	Adherence of coating test (6.4.6 & Annex D)	Benzene/ trichloroethylene, Soft cloth, mandrels

Note: The above list is indicative only and may not be treated as exhaustive.

ANNEX – C

निरीक्षण और परीक्षण की स्कीम

Scheme Of Inspection And Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: **All TIN OR TIN - LEAD COATED COPPER WIRE of same diameter and same coating type extruded under similar conditions in a day shall constitute a control unit.** The manufacturer has the choice to define their own control unit/batch/lot and submit the same to the BIS.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as “R” or other tests which can be subcontracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization

of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. MARKING – The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each label attached to reel or coil of the **TIN OR TIN - LEAD COATED COPPER WIRE** provided always that the **TIN OR TIN - LEAD COATED COPPER WIRE** so marked conforms to the requirements of the specification. In addition, marking shall also be done as per Cl. 7 of **IS 9567 : 2001**.

4. Additional Marking Requirements:

- a) The material shall also be marked with the following additional requirement on label attached to reels or coils:
“For BIS certification details please visit www.bis.gov.in”.

5. REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl. of IS 9567	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
4	Material (Copper)	4.1, 4.2, Annex A	IS 9567	S	Each consignment of components received	Further testing is not required if supplied with BIS Standard Mark or with Test certificate, which ever applicable	
	Material (Tin/ Tin-Lead Alloy)	4.3	IS 26	S			
	Diameter of Coated Wire	4.4	IS 9567	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained		
5	Marking	5	IS 9567	R			
6	Resistance Test	6.3.1	IS 9567	R	One	Each Control Unit	
	Measurement of diameter	6.4.1	IS 9567	R	One	Each Control Unit	
	Elongation and breaking strength test	6.4.2	IS 9567	R	One	Each Control Unit	
	Bend test	6.4.3	IS 9567	R	One	Each Control Unit	
	Solderability Test	6.4.4.1, 6.4.4.2	IS 9567	R	One	Each Control Unit	
	Continuity of coating test	6.4.5 Annex C	IS 9567	R	One	Each Control Unit	

	Adherence of coating test	6.4.6 Annex D	IS 9567	R	One	Each Control Unit	
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ANNEX – D

एक दिन में संभावित परीक्षण Possible Tests in a day

1. Measurement of diameter (6.4.1)
2. Resistance test (6.3.1)
3. Bending Testing (6.4.3)
4. Solderability Test (6.4.4.1) - before accelerated ageing