



उत्पाद मैनुअल
विशिष्ट प्रकार के कुंडलण तारों की विशिष्टियों
भाग 27 कागज़ टेप से आच्छादित ढका हुआ सेक्शन 3 आयताकार तांबे के तार
आईएस 13730 (Part 27/Sec 3): 2025 के अनुसार

PRODUCT MANUAL
Specification for Particular Types of Winding Wires
Part 27 Paper Tape Covered Section 3 Rectangular Copper Wire
according to IS 13730 (Part 27/Sec 3): 2025

यह उत्पाद नियमावली सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसधारियों द्वारा विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना-1 के अंतर्गत प्रमाणन के संचालन में एकरूपता और पारदर्शिता सुनिश्चित करने के लिए संदर्भ सामग्री के रूप में उपयोग की जाएगी। बीआईएस प्रमाणन प्राप्त करने के इच्छुक भावी आवेदक भी इस दस्तावेज़ का उपयोग कर सकते हैं।

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 13730 (Part 27/Sec 3): 2025/ IEC 60317-27-3 : 2019 + AMD 1 : 2024 CSV
	शीर्षक / Title	:	Specification for Particular Types of Winding Wires Part 27 Paper Tape Covered Section 3 Rectangular Copper Wire
	संशोधनों की संख्या No. of amendments	:	Nil
2.	नमूनाकरण दिशानिर्देश / Sampling Guidelines		
a)	कच्चा माल Raw material	:	1. Enamelled Rectangular Copper Wire – IS 13730 (Part 0/ Sec 2): 2024/ IEC 60317-0-2: 2020 2. Paper Tape – IS 9335 (Part 3/Sec 5)/ IEC 60554-3-5 <i>Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence/Factory Surveillance.</i>
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer ANNEX – A
c)	नमूने का परिमाण / Sample Quantity	:	10 m of Paper tape covered Rectangular Copper Wire
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर/ Parameters to be Declared in Test Request	:	Parameters as given in scope of licence. <i>Note: Apart from the above, any other requirements/ parameters may also be declared as per the standard, as applicable.</i>

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3.	परीक्षण उपकरण की सूची List of Test Equipment	:	Please refer ANNEX – B
4.	निरीक्षण एवं परीक्षण योजना Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	All tests <i>Note: This section is for the guidance of BIS Certification Officers/ Technical Auditors of BIS Authorized Outside Surveillance Agencies(OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/ auditor.</i>
6.	लाइसेंस का दायरा / Scope of the Licence:		

“Licence is granted to use Standard Mark as per **IS 13730 (Part 27/Sec 3): 2025** with the following scope:

Name of the product	Paper Tape Covered Rectangular Copper Wire
Nominal Conductor Dimensions	 (width) x(thickness) mm to up to and including (width) x(thickness) mm
No. of layers of Paper	
Any Other Declarations	(a) Increase in dimensions due to paper tape covering (b) Proof Strength, Plastic extension (if declared)

ANNEX -A

Grouping Guidelines

1. For considering Grant of Licence/Change in Scope of Licence, Paper Tape Covered Rectangular Copper Wire of lowest dimensions (width x thickness) and highest dimensions (width x thickness) shall be tested to cover conductors of all sizes in that group.
2. The Firm shall declare the varieties and sizes they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
3. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

Note: Firm **may** declare the following parameters, **as applicable** and conformity is to be ensured, **when declared**:

- The firm shall declare the increase in dimensions due to paper tape covering (Cl. 4.4).
- The firm **may** declare the **Proof Strength, Plastic extension** (Cl.6).

ANNEX- B

List of Test Equipments

(Indicative List, For Guidance Only)

Sl. No.	Test Equipment	Test used with Clause reference
1	Digital Micrometer Vernier Caliper Caliper Gauge (as specified in Cl. 4.5)	Dimensions as per Cl. 4
2	Double Kelvin Bridge with Galvanometer Thermometer	Electrical Conductor Resistance as per Cl. 5
3	Tensile Testing Machine	Elongation Test as per Clause 6
4	Fixtures as specified in Cl. 4 of IS 13778 – 3	Spring ness as per Cl. 7
5	Fixtures as specified in Cl. 5 of IS 13778 – 3 Mandrels	Flexibility and adherence
6	Thermometer Hygrometer Air- conditioner Humidifier	Conductor Conditioning as per IS 13730 (Part 0/ Sec 2)/ IEC 60317-0-2

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

ANNEX C

Scheme of Inspection and Testing

1. QUALITY ASSURANCE PLAN

- 1.1 It is expected that during operation of BIS licence manufacturers will implement a Quality Assurance Plan (QAP) 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 (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or sub-contracting/ sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.
- 1.3 Recommended Levels of Control/ Control Unit:**
- 1.3.1 For the guidance of manufacturers, the recommended definition of control unit is *Paper Tape Covered Rectangular Copper Wire of same variety manufactured in a day under similar process condition from the same consignment of raw materials* shall constitute a control unit.
- 1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1. Manufacturer has the discretion of declaring their own levels of control or accept the levels of control given in this document.
- 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.
- 1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING

The manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred:

- i) Shared testing resources like common facility,
- ii) Cluster based testing facility,
- iii) Sub-contracting to outside laboratories which may either be:
 - a) BIS recognised/ empanelled laboratories, or
 - b) Any accredited laboratory as per ISO/IEC 17025

2.1 Test Records- The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities, shall be made available for

inspection by BIS.

3. PACKING AND MARKING

The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on the label on spool/coil of Paper Tape Covered Rectangular Copper Wire and also on the packaging (if applicable) provided always that the product so marked conforms to each requirement of the specification.

3.1 Packaging and Marking shall be done as per Cl.30 of IS 13730 (Part 27/Sec 3):2025.

3.2 **Additional Marking requirements:** The label on the spool/coil of product shall also be marked with the following additional requirement:

a) "For BIS certification details please visit www.bis.gov.in"

4. REJECTION

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

(Recommended Levels of Control by BIS- for Guidance Only)

(1)				(2)		
Test Details				Levels of Control		
Cl.	Requirement	Clause	Test Methods Reference	No. of Sample	Frequency	Remarks
3.2.1	Enamelled Rectangular Copper Wire	3.2.1	IS 13730 (Part 0/ Sec 2): 2024/ IEC 60317-0-2 : 2020	Each consignment		No further testing is required if accompanied Test Certificate
1	Paper Tape	1	IS 9335 (Part 3/Sec 5)/ IEC 60335-3-5	Each consignment		
3.3	Appearance	3.3	IS 13730 (Part 27/ Sec 3)	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
4	Dimensions					
4.1	Conductor Dimensions	4.1	IS 13730 (Part 0/Sec 2): 2024/ IEC 60317-0-2 : 2020	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
4.2	Tolerance on Conductor Dimensions	4.2				
4.3	Rounding of Corners	4.3				
4.4	Increase in dimensions due to paper tape covering	4.4 & Table 1	IS 13730 (Part 27/ Sec 3)			
4.5	Maximum Overall Dimensions	4.2 & 4.4	IS 13730 (Part 27/ Sec 3)			
5	Electrical Resistance	5	IS 13730 (Part 0/Sec 2): 2024/ IEC 60317-0-2 : 2020	One	Each Control Unit	
6	Elongation	6				
7	Springness	4	IS 13778 (Part 3)			
8	Flexibility and adherence	5	IS 13778 (Part 3)			

