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उत्पाद मैन्युअल
टिन इंगट – विशिष्टि
IS 26: 2024 के अनुसार

Product Manual for
Specification for Tin Ingot
According to IS 26: 2024

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.	**भारतीय मानक संख्या** **IS No.**	:	IS 26:2024
	शीर्षक **Title**	:	Tin Ingot- Specification
	संशोधनों की संख्या **No. of amendments**	:	Nil
2.	**नमूना दिशानिर्देश** **Sampling Guidelines**		
a)	**कच्चा माल** **Raw material**	:	A per Clause 6 of IS 26:2024 (The refined tin shall be produced from ore or, secondary tin-bearing materials, or a combination of both to obtain the requirements of this specification) **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**

b)	**समूहीकरण दिशानिर्देश** **Grouping Guidelines**	:	Sample of each grade of Tin Ingot shall be tested for the requirements of Chemical Composition only.
c)	**नमूने का परिमाण** **Sample Quantity**	:	For Physical tests: Surface Condition of Ingots, Shape & Mass of Ingots shall be carried out in the factory on the ingot. For chemical composition: 500gms in the form of Drillings or Molded buttons from the ingot (As per instrumental method) **Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (in case of market surveillance, effort may be made to procure the required quantity of product sample, as far as possible since raw material sample may not be available in market)**
d)	**परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर** **Parameters to be Declared in Test Request**	:	Grade Designation Note: Apart from the above, any other requirements/parameters may also be declared as per the standard, as applicable.
3.	**परीक्षण उपकरणों की सूची** **List of Test Equipment**	:	Please refer to Annex- A
4.	**निरीक्षण और परीक्षण की स्कीम** **Scheme of Inspection and Testing**	:	Please refer to Annex- B
5.	**एक दिन में संभावित परीक्षण** **Possible tests in a day**		
	All Tests can be carried out in a day **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.**		
6.	**लाइसेंस का दायरा /Scope of the Licence:**		
	26:2024 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेंस निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है “Licence is granted to use Standard Mark as per IS 26:2024 with the following scope:		
7.	**उत्पाद का नाम** **Name of the product**	**Tin Ingot**	

	Grade Designation	**(i) Sn99.75** **(ii) Sn99.85** **(iii) Sn99.90** **(iv) Sn99.93** **(v) Sn99.95** **(vi) Sn99.99**

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NEW DELHI-110002

ANNEX – A

LIST OF TEST EQUIPMENTS
(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	**Tests Used in with Clause Reference**	**Test Equipment/Chemicals and Identification Numbers (Where applicable)**
1.	Chemical Composition, cl 7, Table-1 (Sb, As, Bi, Cd, Cu, Fe, Pb, Al, Zn)	The chemical analysis shall be done either by the methods specified in IS 1940 or by any other established instrumental/wet chemical method. Equipment for analyzing chemical composition by any established method. Optical Emission Spectrometry or any other. Standard Reference Materials with Certificate
2.	Surface Condition of Ingots, Cl 8	Visual Inspection
3.	Shape and Mass of Ingots, Cl 9	Weighing Scale

ANNEX- B
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: For the purpose of this scheme, all the tin ingots of the same type, and grade produced from the same cast/melt under uniform conditions of manufacture at one time shall be taken as one 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.**

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/empanelled 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. PACKING AND MARKING - The Standard Mark as given in the Schedule of the license and Licence Number (i.e. CM/L…) shall be suitably incorporated on each ingot or on the label attached to each of these materials and/or on the test certificate accompanying with each consignment of ingots, provided always that the material so marked and packed conforms to all the requirement of the specification.

3.1 Packing and Marking shall be done as per the Indian Standard.

3.2 **Additional Marking requirements**: The material shall also be marked with the following additional requirement on each Package of ingots:

a) "For BIS certification details please visit www.bis.gov.in"
b) Any other requirement not specified in the Indian Standard

4. TEST CERTIFICATE – For each consignment of BIS Certified material conforming to IS 26:2024 there shall be a test certificate which shall contain the Standard Mark, the cast/Control Unit number and the corresponding test results **(as given in Annexure-I enclosed).**

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

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		(4)
TEST DETAILS					**LEVELS OF CONTROL**		
Clause	**Requirements**	**Test Method**		**Test equipment requirement R: required (or) S:Sub-contracting permitted**	**No. of Samples**	**Frequency**	**Remarks**
		Clause	**Reference**				
7, Table 1	Chemical Composition	7, Table 1	IS 1940 or by any other Established instrumental/wet chemical method.	R	One	Each Lot	__
8	Surface condition of Ingots	8.1, 8.2	IS 26:2024	R	Firm shall exercise adequate in process controls to ensure that surface of the each ingot shall be clean, free of holes and pores, without burs and reasonably free of foreign adhering material.		__
9	Shape and Mass of Ingots	9	IS 26:2024	R	Adequate inspection to ensure that shape and mass of each ingot conforms to the requirements as agreed to between the purchaser and supplier		__

Annexure-I

(Para 4 of the Scheme of Inspection and Testing)
XYZ COMPANY
(Registered office Address and works address)

ISI Mark
With IS No.
and CM/L
no.

Test Certificate for Tin Ingots as per IS 26:2024
TEST CERTIFICATE NO._____

To M/s_____ Dated _____

We certified that the material described below fully conforms to IS 26:2024 Chemical composition and Physical properties of the product as tested in accordance with the Scheme of Inspection and Testing contained in the BIS Certification Marks LicenceNo.CM/L_____ are as indicated below against each order No.

(PLEASE REFER TO IS 26:2024 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

Order No. & Date	Control unit No.	Grade	Quantity (in tonnes)	Chemical Composition (in %)											Surface Condition	Remarks
				Sn	Sb	As	Bi	Cd	Cu	Fe	Pb	Al	Zn	Total of all impurities		

Remarks
Wagon No.
Truck No.

FOR XYZ Company

(It is suggested that size A4 paper be used for this test Certificate)