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उत्पाद मैन्युअल
भण्डारण इकाइयां
आई एस 17634:2022 के अनुसार

PRODUCT MANUAL
STORAGE UNITS
ACCORDINGTO IS 17634:2022

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 17634 : 2022
	शीर्षक **Title**	:	Storage Units
	संशोधनों की संख्या **No. of amendments**	:	1
2.	**नमूना दिशानिर्देश** **Sampling Guidelines**		
a)	**कच्चा माल** **Raw material**	:	All types of surface material [rigid surface and fabric and/or leather (synthetic and natural)], which shall be tested for the tests as per Clause 6 of IS 17634:2022, shall conform the minimum performance requirements specified in IS 17637. Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be establishedduring Grant of Licence/Change in Scope of Licence/ Factory Surveillance
b)	**समूहीकरण दिशानिर्देश** **Grouping Guidelines**	:	Please refer to Annex-A
c)	**नमूने का परिमाण** **Sample Quantity**	:	• 1 Unit – For Dimensional and Safety requirements (clause 4, 5 & 7) 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 (incase of market surveillance, effort may be made to procure therequired 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**		- Same as the scope of licence - Drawing and technical specification of the concerned model(s) of the chair drawn
3.	**परीक्षण उपकरणों की सूची** **List of Test Equipment**	:	Please refer to Annex-B
4.	**निरीक्षण और परीक्षण की स्कीम** **Scheme of Inspection and Testing**	:	Please refer to Annex-C
5.	**एक दिन में संभावित परीक्षण** **Possible tests in a day**		
	(i) Design and Workmanship (Cl 4) (ii) Dimensions (Cl 5) (iii)All tests except durability test (Cl 7) 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 readyreference 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:**		
	"Licence is granted to use Standard Mark as per IS 17634:2022 with the following scope:		
	Name of the product	Storage Units	
	Performance Category	Domestic / Institutional (light) / Institutional (heavy)	
	Model (by name/number/code)	1st Family : xxxxxxxx Lead Model Name (variant): xxxxx, Other Model Names (variants) of the same Family : xxxx, xxxx	
		1st Family : xxxxxxxx Lead Model Name (variant): xxxxx, Other Model Names (variants) of the same Family : xxxx, xxxx	

ANNEX A
Grouping Guidelines

1. IS 17634:2022 covers covers the requirements related to the performance and safety of storage units. The Standard applies to completely manufactured/ fabricated storage units as well as ready-to-assemble units.

2. Storage Units covered in IS 17634:2022 are classified as follows :

   (a) Performance Category:
   - Domestic (Test Level 1)
   - Institutional (light) (Test Level 2)
   - Institutional (heavy) (Test Level 3)

   (b) Model Name

3. **Family of models and Lead model in a family:**

   (a) The manufacturer shall declare all the model names (variants) of the storage units along with following essential parameters of each model name:

   (i) Performance Category : Domestic (Test Level 1)/ Institutional (light) (Test Level 2)/ Institutional (heavy) (Test Level 3)

   (ii) Construction of storage units :
   - With castors / Without castors
   - With seating surface / Without seating surface

   (b) The manufacturer shall also provide the drawing and technical specifications of each model name (variant). The drawing shall include the essential parameters defined at 3(a) above and the information w.r.t. the maximum height of storage unit, availability of extension elements, material of the load bearing components of storage unit, type of door (pivoted/ sliding/ horizontal roll-fronts/ vertical roll-fronts / flaps), whether it is a free Standing unit / units mounted to the building or other structure, and overall dimensions.

   (c) The manufacturer shall identify the **Family of Models (variants)** and declare the name of the **Lead Model** in each Family along with the names of the other models (variants) to be covered in that Family. A **Family of Models (variants)** is defined as a group of models (variants) having same essential parameters as defined at Serial 3 (a) above as that of the declared Lead Model.

   The **Lead Model (variant)** in a family of models shall incorporate the maximum number of components so that maximum test parameters as given in the Standard can be tested; and it shall be the most adverse model in that family in terms of safety requirements, design and construction, material of the load bearing components, maximum height, length, width, thickness, etc.

The manufacturer shall provide **justification** for covering the various models under the same Family as well as for selection of the Lead Model.

BO shall review the justification provided as above and shall ensure that the selection of the lead model within the family of models is appropriate.

4. For GoL/CSoL of storage units, the grouping guidelines as given below are to be followed:

   (a) Sample of the declared Lead model of a family of models of Storage Units shall be tested to cover all the models in that family of Storage Units without separate testing of those models.

5. The Firm shall declare the varieties (i.e. performance category and model names) of storage units they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.

6. During operation of the licence if new models (variants) are intended to be covered within the existing families of lead models (variants) that are already covered in the scope of licence, firm shall submit the details as per para (2) above along with the drawings, technical specification and justification for coverage within the same Family as well as the adversity of model(s) with respect to the tested Lead Model. On receipt of the details, BO shall review the request of the firm and take action as per para 2(c) for inclusion of these new models (variants). In case, BO is satisfied that the adversity of the models proposed to be included is lesser than the tested lead model then the endorsement shall be issued accordingly, and there is no requirement to collect charges towards inclusion. However, if there is change in the lead model in the same family or a new Family of models is proposed to be included, then such cases shall be processed as per the Regulation 10 of Scheme-I of Schedule-II of BIS (Conformity Assessment) Regulations, 2018.

7. 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

List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	**Tests used in with Clause Reference**	**Test Equipment**
1	Dimensions (clause 5)	- Micrometer, Vernier caliper - Measuring tape - Steel scale - Angle protractor
2	Surface Performance (Tests on rigid surfaces of materials)	
	Resistance to mechanical damage	- As per IS 17641:2021, or, as per Annex B-2 of IS 17637:2021
	Pencil hardness	- as per Annex C-1 of IS 17637:2021
	Resistance to wet heat	- Air conditioner, humidifier & hygrometer - as per Clause 5 of IS 17639:2021
	Resistance to dry heat	- as per Clause 5 of IS 17638:2021
	Resistance to marking by cold liquids	- as per Clause 3 of IS 17640:2021
	Resistance to marking by cold oils and fats	- as per Clause 3 of IS 17640:2021
	Adhesive performance	- as per Annex D-2 of IS 17637:2021
3	Surface Performance (Fabric & leather (synthetic & Natural)	
	Breaking load	- as per IS 1969(Part 1) or IS 7016 (Part 2)
	Elongation at break	- as per IS 1969(Part 1) or IS 7016 (Part 2)
	Tear strength for fabric and leather	- as per IS 6489 (Part 1) IS 7016 (Part 3/Sec 1) or - IS 7016 (Part 3/Sec 2)
	Colour fastness to light for fabric and leather	- as per IS/ISO 105-B02
	Colour fastness to rubbing for fabric and leather	- as per IS/ISO 105-X12
	Colour fastness to perspiration	- as per IS/ISO 105-E04
	Colour fastness to water for fabric and leather	- as per IS/ISO 105- E01
	Pilling resistance	- as per IS 10971 (Part 1) or (Part 2)
	Coating adhesion strength	- as per IS 7016 (Part 5)
	Seam slippage	- as per IS/ISO 13936-2
	Resistance to damage by flexing	- as per IS 7016 (Part 4)
	Abrasion resistance	- as per IS 12673 (Part 2)
	Bursting strength	- as per IS 1966 (Part 1)
	Resistance to cold	- as per IS 1259
	Tear strength for natural leather	- as per IS 5914
	Flexing endurance	- as per IS 5914

	Finish adhesion	- as per IS 6191 (Part 5)
	Colour fastness to artificial light	- as per IS/ISO 105 B02
	Colour fastness to rubbing for natural leather	- as per IS 6191 (Part 4)
	Colour fastness to water spotting	- as per IS 6191 (Part 1)
	Water vapour permeability	- as per IS 5914
	Colour fastness to water for natural leather	- as per IS 6191 (Part 2)
Tests on Furniture -		
4	Stability test (Clause 7.3)	- Floor surface as per Clause B-2 of IS 17634 - Wall surface as per Clause B-3 of IS 17634 - Stops as per Clause B-4 of IS 17631 - Loading Pad as per Clause B-5 of IS 17631 - Test apparatus as per Clause B-6 of IS 17631 - Masses as per Clause B-7 of IS 17631 - Glass Marbles as per Clause B-8 of IS 17631 - Loads for Filing Pockets as per Clause B-9 of IS 17631 - Steel Impact Plates as per Clause B-10 of IS 17631 - Impact Bag as per Clause B-11 of IS 17631
5	Static-Load test (Clause 7.4)	
6	Durability test (Clause 7.5)	

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 theStandard 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 subcontracting/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 : All storage units of same family of models, manufactured in a month 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.

2. ENSURING COMPLIANCE THROUGH TESTING- manufacturers shall ensure compliance of their products to all the requirementsof 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 each storage unit provided always that the material so marked conforms to each requirement of the specification.

3.1 Marking shall be done as per Clause No 9 of IS 17634:2022. Additionally, name of the model (variant) shall also be marked on the product.

3.2 **Additional Marking requirements**: Additionally, the following shall also be marked on product or package :

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**	**Test Methods**		**No. of Sample**	**Frequency**	**Remarks**
		Clause	**Reference**			
4	Design and workmanship	4	IS 17634	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.		
5	Dimensions	5	IS 17634 (as declared)			
6	**Surface performance (of materials)**					
	Rigid Surfaces	-	IS 17637	One	Each Consignment	No further testing is required if accompanied with test certificate or ISI marked. If the raw material has already been tested for the applicable requirements mentioned in 6.1 and 6.2, then no re-testing shall be carried out with the final product.
	Fabric and Synthetic Leather					
	Natural Leather					
7	**SAFETY TESTS**					
	Test on Non-Movable Parts					
	Shelves (Cl 7.2.1)					
	General	7.2.1.1	IS 17634	One	Each control unit	-
	Deflection of shelves	7.2.1.2				
	Strength of shelf supports	7.2.1.3				
	Tops and Bottoms (Cl 7.2.2)					

7.2	Sustained load test for tops and bottoms	7.2.2.1	IS 17634	One	Each control unit	-
	Static load test for tops and bottoms	7.2.2.2				
	Strength of Clothes Rails and their Supports (Cl 7.2.3)					
	Strength of clothes-rail supports	7.2.3.1	IS 17634	One	Each control unit	-
	Dislodgement of clothes rails	7.2.3.2				
	Strength of the Structure (Cl 7.2.4)					
	Test for structure and underframe	7.2.4.1	IS 17634	One	Each control unit	-
	Drop test	7.2.4.2				
	Tests for units with castors or wheels	7.2.4.3				
7.3	**Test Procedures for Movable Parts**					
	Pivoted Doors (Cl 7.3.1)					
	Strength of pivoted doors - Vertical load on pivoted doors - Horizontal load on pivoted doors	7.3.1.2	IS 17634	One	Each control unit	-
	Slam-shut test of pivoted doors	7.3.1.3	IS 17634	One	Each control unit	-
	Durability of pivoted doors	7.3.1.4	IS 17634	One	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of three years	
	Sliding Doors and Horizontal Roll-fronts (Cl 7.3.2)					
	Slam shut/open test of sliding doors and horizontal roll-fronts	7.3.2.2	IS 17634	One	Each control unit	-
	Durability of sliding doors and horizontal roll-fronts	7.3.2.3	IS 17634	One	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of three years	
	Flaps (Cl 7.3.3)					
	Strength of bottom-hinged flaps	7.3.3.1	IS 17634	One	Each control unit	-

	Durability of flaps	7.3.3.2	IS 17634	One	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of three years	
	Drop test for top-hinged flaps	7.3.3.3	IS 17634	One	Each control unit	-
	Vertical Roll-Fronts (Cl 7.3.4)					
	Slam shut/open test of vertical roll-fronts	7.3.4.1	IS 17634	One	Each control unit	-
	Durability of vertical roll-fronts	7.3.4.2	IS 17634	One	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of three years	
	Extension Elements (Cl 7.3.5)					
	Strength of extension elements	7.3.5.2	IS 17634	One	Each control unit	-
	Durability of extension elements	7.3.5.3	IS 17634	One	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of three years	
	Slam shut/open test of extension elements	7.3.5.4	IS 17634	One	Each control unit	-
	Displacement of extension element bottoms	7.3.5.5				
	Interlock test	7.3.5.6				
	Locking and Latching Mechanism Tests (Cl 7.3.6)					
	Strength test for locking and latching mechanisms for extension elements	7.3.6.2	IS 17634	One	Each control unit	-
	Locking and latching mechanisms for doors, flaps and roll-fronts	7.3.6.3	IS 17634	One	Each control unit	-
	Durability test of locking and latching mechanisms	7.3.6.4	IS 17634	One	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of three years	
	Pull Force Test	7.3.7	IS 17634	One	Each control unit	-
	Top Load Ease Cycle Test	7.3.8	IS 17634	One	Each control unit	-
	Durability Test for Units with Seating Surfaces – Cyclic Impact	7.3.9	IS 17634	One	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of three years	

	Drop Test – Dynamic – for Units with Seat Surfaces	7.3.10	IS 17634	One	Each control unit	-
7.4	**Units Mounted to the Building or Other Structure**					
	Units Not Supported by the Floor (Cl 7.4.1)					
	Movable parts, shelf supports, tops and bottoms	7.4.1.2	IS 17634	One	Each control unit	-
	Sustained load test (overload)	7.4.1.3				
	Dislodgement test	7.4.1.4				
	Units Supported by the Floor	7.4.2	IS 17634	One	Each control unit	-
7.5	**Stability Tests**					
	Doors, Extension Elements and Flaps Closed, All Storage Units Unloaded (Cl 7.5.2)					
	Units that can be adjusted to a Height of 1 000 mm or less	7.5.2.1	IS 17634	One	Each control unit	-
	Units that can be adjusted to a height of more than 1 000 mm	7.5.2.2				
	Opening Doors, Extension Elements and Flaps, All Storage Units Unloaded	7.5.3	IS 17634	One	Each control unit	-
	Doors, Extension Elements and Flaps Opened and Unlocked (Cl 7.5.4)					
	All storage areas unloaded and all doors, extension elements and flaps open	7.5.4.1	IS 17634	One	Each control unit	-
	All storage areas unloaded with overturning load	7.5.4.2				
	All storage areas loaded with overturning load	7.5.4.3				

	Doors, Extension Elements and Flaps Closed and Locked, All Storage Units Loaded	7.5.5	IS 17634	One	Each control unit	-
	Vertical Force Stability Test for Storage Units	7.5.6				
	Stability Test for Pedestals/Storage Units with Seat Surfaces	7.5.7				
	Dynamic Stability Test for Units with Castors	7.5.8				
	Strength Test for Wall Attachments	7.5.9				

Note-1: All the applicable tests need not to be carried out on the same sample and may be performed on a series of units at the manufacturer's discretion, unless specified within a given test(s) of this standard.