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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**	:	Nil
2.	**नमूना दिशानिर्देश** **Sampling Guidelines**		
a)	**कच्चा माल** **Raw material**	:	Nil 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) • Material cut panels, Fabric & Leather pieces – For Surface Performance tests (clause 6) 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
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 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:**		
	"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 Lead Model : xxxxx, Models of this Family : xxxx, xxxx, xxxx, xxxx, xxxx	
		2nd Lead Model : xxxxx, Models of this Family : xxxx, xxxx, xxxx, 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. The model shall be declared by the manufacturer.

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 (by name/number/code)

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

   (a) The manufacturer shall declare all the models (by name/ number/ code, as uniquely defined by the manufacturer) of the storage units along with following essential parameters and drawing of each model:

   (i) Material of Storage Unit (e.g. natural wood, engineered wood, steel, aluminium, etc.)

   (ii) Construction of storage units :

   i.e.
   - Manufactured/fabricated or ready-to-assemble units,
   - Free Standing unit / units mounted to the building or other structure
   - Type of Door (pivoted/ sliding/ horizontal roll-fronts/ vertical roll-fronts / flaps)
   - With/without castors
   - With/without extension elements
   - With/without seating surface
   - Material of fabric and leather

   (iii) Height of Storage Units :

   As per Table 3, the test loads and forces for the durability test of pivoted doors is different for the following ranges of heights of storage units, i.e. upto 900mm, from 900-1500mm and above 1500mm. Considering the same, the Height of storage units is grouped as given below –

Height Group	Height of storage unit (H)
1	$H \leq 900$ mm
2	900 mm $< H \leq 1500$ mm
3	$H \geq 1500$ mm

(b) The manufacturer shall identify and declare **Family of models** and the **lead model** in each family of models of storage units. **Lead model** represents a family of models declared by manufacturer. A **Family of models** is defined as a group of models having the same Performance Category, same Material of product, same Construction of product; and having Height of product in the same height group, of the declared lead model.

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 models) 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 any new model is intended to be covered within the existing families of lead models that are already covered in the scope of licence, firm is required to submit the details as per para 2(a) above along with its drawing. On receipt of the details, BO to review the request of firm and to take action for inclusion of these new models and the endorsements to be issued accordingly. In such cases, there is no requirement to collect charges towards inclusion.

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 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 storage units of same performance category and model, manufactured in a week 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**.

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 testingfacility 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 laboratoryor 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 licence shall be incorporated indelibly and legibly on each storage unit provided always that the product so marked conforms to each requirement of the specification.

3.1 Marking shall be done as per Clause No 9 of IS 17634:2022.

3.2 **Additional Marking requirements**: The product/packaging shall also be marked with the following additional requirement on the product/ packing:

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

4. 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: Subcontracting permitted	**Levels of Control**		
Cl.	**Requirement**	**Test Methods**			**No. of Sample**	**Frequency**	**Remarks**
		Clause	**Reference**				
4	Design and workmanship	4	IS 17634	R	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				
6	**Surface performance (of materials)**						
	Rigid Surfaces	-	IS 17637	S	One	Each Consignment	
	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	R	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)						
	Sustained load test for tops and bottoms	7.2.2.1	IS 17634	R	One	Each control unit	-

7.2	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	R	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	R	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	R	One	Each control unit	-
	Slam-shut test of pivoted doors	7.3.1.3	IS 17634	R	One	Each control unit	-
	Durability of pivoted doors	7.3.1.4	IS 17634	S	One	Once in six months	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of two 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	R	One	Each control unit	-
	Durability of sliding doors and horizontal roll-fronts	7.3.2.3	IS 17634	S	One	Once in six months	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of two years
	Flaps (Cl 7.3.3)						

	Strength of bottom-hinged flaps	7.3.3.1	IS 17634	R	One	Each control unit	-
	Durability of flaps	7.3.3.2	IS 17634	S	One	Once in six months	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of two years
	Drop test for top-hinged flaps	7.3.3.3	IS 17634	R	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	R	One	Each control unit	-
	Durability of vertical roll-fronts	7.3.4.2	IS 17634	S	One	Once in six months	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of two years
	Extension Elements (Cl 7.3.5)						
	Strength of extension elements	7.3.5.2	IS 17634	R	One	Each control unit	-
	Durability of extension elements	7.3.5.3	IS 17634	S	One	Once in six months	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of two years
	Slam shut/open test of extension elements	7.3.5.4	IS 17634	R	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	R	One	Each control unit	-
	Locking and latching mechanisms for doors, flaps and roll-fronts	7.3.6.3	IS 17634	R	One	Each control unit	-

	Durability test of locking and latching mechanisms	7.3.6.4	IS 17634	S	One	Once in six months	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of two years
	Pull Force Test	7.3.7	IS 17634	R	One	Each control unit	-
	Top Load Ease Cycle Test	7.3.8	IS 17634	R	One	Each control unit	-
	Durability Test for Units with Seating Surfaces – Cyclic Impact	7.3.9	IS 17634	S	One	Once in six months	Each lead model produced during the period shall be tested in rotation so that all the lead models are tested in a period of two years
	Drop Test – Dynamic – for Units with Seat Surfaces	7.3.10	IS 17634	R	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	R	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	R	One	Each control unit	-
	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	R	One	Each control unit	-
	Units that can be adjusted to a height	7.5.2.2					

7.5	of more than 1 000 mm						
	Opening Doors, Extension Elements and Flaps, All Storage Units Unloaded	7.5.3	IS 17634	R	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	R	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	R	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 applicable safety requirements as mentioned in clause 7 of IS 17634:2022 shall be carried out on the same sample and in the sequence as the clauses are numbered in this standard. All tests specified for a particular component shall be carried out on the same sample.