



उत्पाद मैनुअल

एल्युमीनियम फ्रेमयुक्त दरवाजे, खिड़कियाँ और स्लाइडर्स,

आईएस १९४८ : २०२४ के अनुसार

PRODUCT MANUAL

Aluminium Framed Doors, Windows and Sliders,
ACCORDING TO IS 1948: 2024

यह उत्पाद नियमावली सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसधारियों द्वारा विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना-I 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 1948:2024
	शीर्षक / Title	:	Aluminium Framed Doors, Windows and Sliders
	संशोधनों की संख्या No. of amendments	:	0
2.	नमूनाकरण दिशानिर्देश / Sampling Guidelines		
a)	कच्चा माल Raw material	:	As per Cl 5 of IS 1948: 2024 <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	:	1 No. for all tests <i>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 the required quantity of product sample, as far as possible since raw material sample may not be available in market)</i>
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर		In addition to the scope of licence, manufacturer shall declare the following-

	Parameters to be Declared in Test Request		- Test Specimen Size (Clause 7.1 & Table 7 of IS 18648)[Confirmation with the laboratory for testing facility for the size being sent for testing] Note: Apart from the above, any other requirements/ parameters may also be declared as per the standard, as applicable.
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	:	Dimensions and Tolerances 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:		
“License is granted to use Standard Mark as per IS 1948 : 2024 with the following scope:			
Name of the product		Aluminium Framed Doors, Windows and Sliders	
Type		- Windows a) Fixed Window b) Side Hung (Hinged/ Protected) Window c) Projected Top Hung Open Out Window d) Bottom Hung Open in Window e) Tilt & Turn Window f) Vertical Pivot Window g) Horizontal Pivot Window h) Horizontal Sliding Window i) Vertical Sliding Window - Doors a) Horizontal Sliding Door b) Lift and Slide Door c) Single Leaf Open out Door d) Double Leaf Open out Door	
Handing(Where applicable)		LH / RH, Outward / Inward, Vertical Pivot Left hand Opening / Vertical Pivot Right hand opening (see Fig. 3 of IS 18648)	
Number of panels (In case of sliding window/ door)		Upto and including ____	
Size		Upto and Including (Width X Length)	
Design Load		Upto and Including DLxxxx Expressed DLxxxx (e.g., DL2500 is 2500 Pa design pressure) based on	

	<i>calculated design load as per IS 875 (Part 3)</i>
Air Permeability	- Class A (High performance): A0, A1, A2, A3, A4 - Class B (Nominal performance): B0, B1, B2, B3, B4
Water Tightness	Category-1 to 4, Expressed as WxxxKM W = Water tightness - xxx = test pressure in Pa (given in Tables 9–12 of IS 18648 depending on wind zone, Wind Speed & height) - K-Class A/B = (A = higher flow rate, B = lower flow rate) - M-Testing Method - A/B
Operating Force	Class 1 or Class 2
Durability	Grade 0 to Grade 10 <i>NOTE — Grade 4 to Grade 10 will be applicable only for doors.</i>
Mass, Kg	Sash mass in kg.: <i>For sliding rollers: also indicate number of roller sets (e.g., 2/80 = 2 sets of 80 kg capacity).</i>
Corrosion Class	Grade 0 to Grade 5
Optional Performance requirements (Declare wherever applicable)	Thermal Conductivity : U-value in W/m^2k (e.g., upto 3.0 W/m^2k) Acoustics : R_w (dB) or STC rating Impact Resistance : Class 1 to 6 (based on drop height 200–1200 mm, Table 5 of IS 18648) Mechanical Strength : Racking/ Static torsion, Class 1 to 4 Anti-fallout Provision : Yes / No Window Restrictor for Children : Yes / No

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, ९, बहादुर शाह ज़फ़र मार्ग
Manak Bhawan, 9, Bahadur Shah Zafar Marg
नई ददल्ली- ११०००२
New Delhi – 110002

ANNEX -A Grouping Guidelines

1. Product Type Grouping

Each type shall be tested to cover that particular type in a scope of the license.

Note: Horizontal Sliding Window & Horizontal Sliding Door may be considered in same product type.

2. Size Grouping within Each Product Type

For every product type listed above, the following size rules apply:

- 2.1 Any size as per table 7 of IS 18648 & the availability of test facility in lab (in house/ Outside Laboratory) of that specific type shall be tested to cover all the sizes for that particular type.
- 2.2 For sliding windows/Doors, the samples with maximum number of panels shall be tested to cover lesser number of panels in the scope of the license.

3. Performance Class Grouping

Higher performance covers lower performances for the same product type:

3.1 Design Load: The highest DLxxxx value covers all lower DLxxxx values.

3.2 Air Permeability: The highest class of Air Permeability covers all lower classes.

Examples are as follows:

- If tested for A4, it may also cover A3, A2, A1, A0, B4, B3, B2, B1 and B0.
- If tested for A2, it may also cover A1, A0, B2, B1 and B0.
- If tested for A1, it may also cover A0, B1 and B0.

3.3 The highest category of Water Tightness covers all lower categories. The following principles shall apply:

- a) If Category 1 is tested, it may also cover Categories 2, 3 and 4.
- b) If a higher pressure is tested, the corresponding lower pressures for that category may also be covered, along with the lower categories at the same pressure and at lower pressures.
- c) Where Class A is tested, Class B may also be covered.
- d) Either Test Method A or Test Method B may be used for testing.

Examples:

- If W200AB is tested, it may also cover: W200AA, W200BB, W200BA, W150AA, W150AB, W150BA and W150BB.
- If W200BB is tested, it may also cover: W200BA, W150BA and W150BB.

3.4 Operating Force: If Class 2 is tested then it may also cover Class 1. (Class 2 is highest class)

3.5 Durability: Highest Grade covers all lower grades (Grade 10 is highest grade)

3.6 Corrosion Resistance: Highest Grade covers all lower grades (Grade 5 is highest grade)

3.7 Sash / Panel Mass: Any Mass may be tested.

3.8 For Optional requirements:

- a) Thermal Conductivity (U-value, W/m^2K): The lowest U-value (best thermal performance) covers all higher U-values.
- b) Acoustics (R_w or STC): The highest R_w /STC rating covers all lower ratings.
- c) Impact Resistance (Table 5): The highest Impact Class covers all lower classes. (Class 6 is highest impact class)
- d) Mechanical Strength (Table 6): The highest Class covers all lower classes.
- e) If with anti-fallout provision and/or with window restrictor for children are/is tested, then without these provisions may also be covered.

4. The Firm shall declare the varieties of Aluminium Framed Doors, Windows and Sliders; they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the manufacturer.

5. 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.

ANNEX- B**List of Test Equipments***(Indicative List, For Guidance Only)*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Dimensions and Tolerances (Clause 6 of IS 1948 & Clause 5 of IS 18648)	a) Vernier Calliper, b) Micrometre, c) Steel scale, d) Measuring tape.
2.	Air Permeability (Clause 7.3 of IS 18648)	Test setup as per IS 18472.
3.	Water Tightness a. Static Water Penetration (Clause 7.4.2 of IS 18648) b. Dynamic/ Cyclic Water Penetration (Clause 7.4.3, 7.4.4 of IS 18648)	Test setup as per IS 18459 for Static & Cyclic Water Penetration. Test setup as per IS 18647 for Dynamic Water Penetration.
4.	Resistance to wind load (Clause 7.5 of IS 18648)	Test setup as per IS 18473.
5.	Operating force (Clause 6.1.6 of IS 18648)	Test setup as per IS 18268/ ISO 9379.
6.	Durability (Resistance to Repeated Opening and Closing) (Clause 6.1.7 of IS 18648)	Test setup as per IS 17909/ISO 8274.
7.	Mass (Clause 6.1.8 of IS 18648)	- Weighing machine.
8.	Corrosion (Salt spray test) (Clause 6.1.9 of IS 18648)	Test setup as per IS 9844.
9.	Thermal Conductivity (Clause 6.1.10 of IS 18648)	Test setup as per Clause 6.1.10 of IS 18648.
10.	Acoustic (Noise Levels) (Clause 6.1.11 of IS 18648)	Test setup as per IS 9901 (Part 3).
11.	Impact Resistance (Clause 6.1.12 of IS 18648)	Test setup as per Annex D & fig 9 of IS 18648.
12.	Mechanical Strength - Racking and static torsion (Clause 6.1.13.1 of IS 18648) - Diagonal deformation (Clause 6.1.13.2 of IS 18648)	Test setup as per IS 19006/ISO 8248.
13.	Anti-fallout (Clause 6.1.14 of IS 18648)	Test setup as per Clause 5.6.2 & 5.6.3 of IS 1948
14.	Window Restrictor for Children (Clause 6.1.15 of IS 18648)	Test setup as per Clause 5.6.1 of IS 1948

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: *All aluminium framed doors, windows and sliders of the same product type, size, material, classification and additional description manufactured in a day 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 each door, window and slider provided always that the material so marked conforms to all requirements of the specification.

3.1 Marking on each door, window and slider shall be done as per Cl. 10 of IS 1948: 2024

3.2 **Additional Marking requirements:** Each door, window and slider shall also be marked with the following additional requirement on each packing:

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)					(3)		
Test Details					Levels of Control		
Cl.	Indian Standard	Requirement	Test Methods		No. of Sample	Frequency	Remarks
			Clause	Reference			
5	IS 1948	Materials and construction	5	IS 1948	One	Each consignment	No further testing required if accompanied with test certificate or ISI marked
6	IS 1948	Dimensions and Tolerances	5	IS 18648	One complete assembly	Each piece	-
6.1.8	IS 18648	Mass	6.1.8	IS 18648			
7.3	IS 18648	Air Permeability	-	IS 18472	One complete assembly	Once in Six Months	All the varieties produced during the period shall be tested
7.4.2	IS 18648	Water Tightness-Static Water Penetration	-	IS 18459			
7.4.3/ 7.4.4	IS 18648	Water Tightness-Dynamic/ Cyclic Water Penetration	-	IS 18647/ IS 18459			
7.5	IS 18648	Resistance to wind load	-	IS 18473			
6.1.6	IS 18648	Operating force	-	IS 18268/ ISO 9379			
6.1.7	IS 18648	Durability (Resistance to Repeated Opening and Closing)	-	IS 17909/ IS O 8274			
6.1.9	IS 18648	Corrosion (Salt spray test)	-	IS 9844			
6.1.10	IS 18648	Thermal Conductivity	6.1.10	IS 18648			
6.1.11	IS 18648	Acoustic (Noise Levels)		IS 9901 (Part 3)			
6.1.12	IS 18648	Impact Resistance	Annex D	IS 18648			
6.1.13.1	IS 18648	Mechanical Strength - Racking and static torsion	-	IS 19006/ IS O 8248			
6.1.13.2	IS 18648	Mechanical Strength - Diagonal deformation					
6.1.14	IS 18648	Anti-fallout	Clause 5.6.2 & 5.6.3	IS 1948			
6.1.15	IS 18648	Window Restrictor for Children	Clause 5.6.1	IS 1948			