



उत्पाद मानुयल
फ्लैट पारदर्शी शीट ग्लास के लिए विशिष्ट
IS 2835 : 1987 के अनुसार

**PRODUCT MANUAL FOR
SPECIFICATION FOR FLAT TRANSPARENT SHEET GLASS
ACCORDING TO IS 2835 : 1987**

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरण के प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेंस धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेंस/प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence 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 licence/certificate.

1.	उत्पाद Product	:	IS 2835 : 1987
	शीर्षक Title	:	फ्लैट पारदर्शी शीट ग्लास के लिए विशिष्ट Specification for Flat Transparent Sheet Glass
	संशोधनों की संख्या No. of Amendments	:	NIL
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	No specific requirements

b)	समूहीकरण दिशानिर्देश Grouping guidelines	:	कृपया Annex-A देखें Please refer ANNEX – A
c)	नमूने का परिमाण Sample Size	:	4 pieces of 1m x 1m
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-B देखें Please refer ANNEX – B
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	कृपया Annex-C देखें Please refer ANNEX – C
5.	एक दिन में संभावित परीक्षण Possible tests in a day:		
	Dimension		
	Thickness		
	Distribution of Allowable defects		
6.	लाइसेन्स का कार्यक्षेत्र / Scope of the Licence:		
	IS 2835 : 1987 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है Licence is granted to use Standard Mark as per IS 2835 : 1987 with the following scope:		
	Name of the product		Flat Transparent Sheet Glass
	Quality		AA and/or A and/or B and/or C
	Thickness		From mm to mm

ANNEX A

GROUPING GUIDELINES FOR FLAT TRANSPARENT SHEET GLASS ACCORDING TO IS 2835 : 1987

IS 2835 : 1987 classifies sheet glass into 4 qualities :

1. AA Quality or Special Selected Quality (SSQ)
2. A Quality or Selected Quality (SQ)
3. B Quality or Ordinary Quality (OQ)
4. C Quality or Greenhouse Quality (GQ)

The following grouping guidelines shall be followed for Grant of Licence/Change in scope of licence for Flat Transparent Sheet Glass as per IS 2835:1987:

- i) **Separate sample shall be tested for each quality.**
- ii) **For covering all thicknesses in a range within the scope of licence of a particular quality, a sample of the highest and lowest thicknesses shall be drawn for testing.**
- iii) Licence may be granted or change in scope may be allowed for covering all the thicknesses within the range if the samples are found passing in testing.
- iv) However, it shall be ensured that the firm is having all the necessary manufacturing and testing facilities for the manufacture and testing of the varieties to be included in the licence.
- v) During the operation of the licence, samples of all varieties shall be drawn by rotation.

ANNEX-B
List of Test Equipments
For Flat Transparent Sheet Glass
According to IS 2835 : 1987

Major test equipment required to test as per the Indian Standard

Sl. No.	Test Equipment	Tests used in with Clause Reference
1	i. Vernier calipers and micrometer ($LC \leq 0.01$ mm) ii. Measurement Tape iii. Measurement Table (Flat surface)	Dimension, Clause 4.2
2	i. Viewing arrangement ii. Vernier Calipers iii. Measuring Tape	Distribution of Allowable Defects, Clause 4.3
3	i. Vertical Wooden Plank ii. Thread	Bow, Clause 5.3
4	i. Light projector with a 500 W lamp ii. Objective lens with an approximate 5 cm aperture and about 30 cm focal length on a flat white projection screen placed about 760cm from the light source iii. Dark room	Rims, Strings and Lines, Clause 5.4
5	Projector and Screen as per Fig 1 of IS 2835	Waviness, Appendix A

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

ANNEX C
SCHEME OF INSPECTION AND TESTING
FOR FLAT TRANSPARENT SHEET GLASS
ACCORDING TO IS 2835 : 1987

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment's.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. PACKING AND MARKING – The Standard Mark, as given in the Schedule of the licence, shall be marked on the packages, provided always that each Sheet glass to which this mark is thus applied, conform to every requirement of the specification.

3.1 Marking – Each package shall be legibly marked to give the information as per clause 6.2 of IS 2835. In addition, the following details shall be mentioned on each package legibly and indelibly:

- a) BIS Licence No. CM/L..... and
- b) BIS website details i.e. – “For details of BIS certification please visit www.bis.gov.in”.

3.2 Packing – The sheet glass shall be packed as agreed to between the purchaser and the supplier.

4. CONTROL UNIT – For the purpose of this scheme, the total quantity of sheet glass of the same type produced from the same type of raw material in one day shall constitute one control unit

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – 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
LEVELS OF CONTROL
(Para 5 of Scheme of Inspection and Testing)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4.1	Material	4.1	IS 2835	R	Each piece	Each Control Unit	
4.1.1	Cracks	4.1.1	IS 2835	R	Each piece	Each Control Unit	
4.2	Dimension	4.2	IS 2835	R	5 percent but not less than 5 pieces	Each Control Unit	
4.3	Distribution of Allowable Defects	4.3	IS 2835	R	5 percent but not less than 5 pieces	Each Control Unit	Except (Scratches Rubs and Crush, Bow, Reams, Strings and Lines and Waviness)
4.3.1	Allowable Cluster of Defects	4.3.1	IS 2835	R	5 percent but not less than 5 pieces	Each Control Unit	
5.1	Thickness	Appendix B	IS 2835	R	5 percent but not less than 5 pieces	Each Control Unit	
5.2	Scratches Rubs and Crush	5.2	IS 2835	R	5 percent but not less than 5 pieces	Each Control Unit	
5.3	Bow	5.3	IS 2835	R	5 percent but not less than 5 pieces	Each Control Unit	
5.4	Reams, Strings and Lines	5.4	IS 2835	S	5 Pieces	Once in 3 months	
5.5	Waviness	Appendix A	IS 2835	S	5 Pieces	Once in 3 months	

Note-1: Whether test equipment is required or subcontracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: The control unit and levels of control as decided by the Bureau are obligatory, to which the licensee shall comply with.