



**उत्पाद मैनुअल
अनम्य पीवीसी शीट – विशिष्टि
IS 6307: 2023 के अनुसार**

**Product Manual for
Rigid PVC Sheets - Specification According to IS 6307: 2023**

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 6307 : 2023
	शीर्षक Title	:	Rigid PVC Sheets - Specification
	संशोधनों की संख्या No. of amendments	:	NIL
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	No Specific requirement
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer Annex-A
c)	नमूने का परिमाण Sample Quantity	:	4 Sheets for complete testing.
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	Type, Manufacturing Process, Thickness
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please see Annex – B

4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please see Annex – C
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	All tests except Vicat Softening Temperature		
6.	लाइसेंस का दायरा /Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 6307 : 2023 with the following scope:		
	Name of the product		Rigid PVC Sheets - Specification
	Type		• Type 1 – General Purpose • Type 2 – Impact Resistant • Type 3 – Vacuum Forming
	Manufacturing Process		• Extruded • Calendered • Calendered & Laminated
	Thickness Range		0.10 mm to 24 mm
	Optional requirement – Horizontal Burning Characteristics		With/Without

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ANNEX – A
GROUPING GUIDELINES

1. IS 6307: 2023 covers Rigid PVC Sheets which are classified as given below:

- a) Type - Type 1 / Type 2/Type 3
- b) Manufacturing Process - Extruded/Calendered / Calendered & Laminated
- c) Thickness Range- 0.10 mm to 24 mm

2. Considering the above, following grouping guidelines is developed for GoL/CSoL :

Sample of each type of Rigid PVC Sheets for each Manufacturing Process shall be tested for all requirements to cover that type and manufacturing process in the scope of the licence. Sample(s) of lowest, intermediate and highest thickness is to be tested to cover the thickness range. If with optional requirement is covered, without optional requirement may also be included in the scope of licence.

3. The Firm shall declare the various varieties of Rigid PVC Sheets they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.

4. 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/Chemical
1	Thickness / Gravimetric Thickness, Cl 5.2 & Annex A	Micrometer (least count 0.01 mm), Analytical Balance, Water bath, Suspension wire
2	Length & Width, Cl 5.3	Measuring Tape / Steel Scale
3	Squareness, Cl 5.4	Steel Square / Measuring Scale
4	Vicat Softening Temperature, Table 2 & Annex B	Vicat Apparatus with oil bath, Indenter, Dial Gauge, Temperature controller
5	Impact Strength, Table 2 & Annex C	Falling Weight Impact Tester, Steel Ball (12.5 mm dia), Weight carrier, Release mechanism
6	Tensile Stress at Yield Table 2 & Annex D	Universal Testing Machine (UTM), Dumbbell specimen cutter
7	Dimensional Change at 120°C, Table 2 & Annex E	Air Oven ($120 \pm 2^\circ\text{C}$), Glass plate, Measuring scale
8	Delamination, Cl 5.6 & Annex F	Acetone bath setup (beakers), Vice, Hammer, Wedge tool
9	Horizontal Burning Characteristics, Cl 5.7 & Annex G	Flame chamber, Burner, Wire gauze, Stopwatch
10	Appearance, Cl 5.1	Visual inspection under adequate lighting
11	Conditioning of Specimen, General (conditioning)	Conditioning Chamber ($27 \pm 2^\circ\text{C}$, $65 \pm 5\% \text{ RH}$)

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 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 rigid PVC sheets of the same type, thickness, manufacturing process (extruded/calendered/calendered & laminated) and formulation, manufactured under similar conditions of production in a single shift or batch, 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 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 all rigid PVC sheets provided always that the material so marked conforms to each requirement of the specification.

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

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

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 Clause Reference		No. of Sample	Frequency	Remarks
5.1	Appearance	5.1	Visual	All	Each Control Unit	—
5.2	Thickness	5.2	Annex A	2	Each Control Unit	—
5.3	Length & Width	5.3	—	2	Each Control Unit	—
5.4	Squareness	5.4	—	2	Each Control Unit	—
5.5 Table 2	Vicat Softening Temperature	5.5 Table 2	Annex B	2	Each Control Unit	—
5.5 Table 2	Impact Strength	5.5 Table 2	Annex C	20 specimens	Each Control Unit	Applicable for ≥ 1 mm thickness
5.5 Table 2	Tensile Stress at Yield	5.5 Table 2	Annex D	5 specimens	Each Control Unit	—
5.5 Table 2	Dimensional Change at 120°C	5.5 Table 2	Annex E	1	Each Control Unit	—
5.6	Delamination	5.6	Annex F	3	Each Control Unit	For laminated sheets
5.7	Horizontal Burning Characteristics	5.7	Annex G	3	As agreed / Once in a year	If required by purchaser