



**उत्पाद मैनुअल
आई एस 17400:2021 के अनुसार
काँच रेशा प्रबलित जिप्सम पैनल के लिए**

दस्तावेज संख्या – पी एम/आई एस IS 17400/1/Feb 2023

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज का उपयोग किया जा सकता है।

**PRODUCT MANUAL FOR
GLASS FIBRE REINFORCED GYPSUM PANELS
ACCORDING TO IS 17400:2021**

Document No.- PM/ IS 17400/1/Feb 23

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.

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1.	Product	:	IS 17400 : 2021
	Title	:	Glass Fibre Reinforced Gypsum Panels
	No. of Amendments	:	NIL
2.	Sampling Guidelines:		
a)	Raw material	:	Calcined Gypsum/Gypsum Plaster (Cl 5.1), Glass Fibre Rovings (Cl 5.2), Potable Water (Cl 5.3)
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	4 Gypsum panels
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day :		
	Visual inspection, Dimensions, Squareness, physical requirements- general, panel mass and Moh's hardness		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 17400 with the following scope:		
	Name of the product	Glass Fibre Reinforced Gypsum Panels	
	Class	Class 1 or Class 2	

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ANNEX A

Grouping Guidelines

1. Glass Fibre Reinforced Gypsum Panels covered in IS 17400 are classified as under:
 - Class: Class 1 or Class 2
2. Considering the above, following grouping guidelines for GoL/ CSoL have been developed:
 - Each Class shall be tested for all requirements to cover that particular Class in the scope of licence.
3. 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 varieties covered in the Licence may be tested in rotation, to the extent possible

ANNEX-B**List of Test Equipment*****Major test equipment required to test as per the Indian Standard***

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Dimensions(Clause 7.2)	- Measuring tape - Steel scale - Micro meter - Straightness edge - Squareness edge
2.	Water content	- Test facilities as per Annex C of IS 17400
3.	Panel mass	- Weighing balance
4.	Water absorption	- Test facilities as per Annex D of IS 17400
5.	Vertical Load bearing capacity	- Test facilities as per Annex E of IS 17400
6.	Out-of-plane moment capacity, Rib parallel to span	- Test facilities as per Annex F of IS 17400
7.	Out-of-plane moment capacity, Rib perpendicular to span	- Test facilities as per Annex F of IS 17400
8.	Moh's hardness	- Test facilities as per IS 13630 (Part 13)
9.	Fire resistance (structural adequacy/ integrity/insulation)	- Test facilities as per IS/ISO 834 (Part 4)
10.	Glass Fibre content	- Test facilities as per Annex G of IS 17400

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

ANNEX C**Scheme of Inspection and Testing**

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 equipments.

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

3. LABELLING AND MARKING –As per the requirements of IS 17400 : 2022.

4. CONTROL UNIT – All gypsum panels of same class produced in a day from similar raw material under similar condition of production in a day shall constitute a 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

(1)				(2)	(3)			
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control			
Cl.	Requirement	Clause Reference	Test Methods		No. of Sample	Frequency	Remarks	
5	Calcined Gypsum/ Gypsum Plaster	5.1	IS 17400 IS 12654		S	One	Each consignment	No further testing is required if ISI marked or accompanied with test certificate.
5	Glass Fibre Rovings	5.2	IS 17400					
5	Potable Water	5.3	IS 17400 IS 456					
7	PHYSICAL REQUIREMENTS -							
7.1	General	7.1	IS 17400	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			
7.2	Visual Inspection & Dimension and Squareness	7.2	IS 17400	R				
7.3	Water content	Annex-C	IS 17400	R	One	Each Control unit	-	
7.3	Panel mass	-	IS 17400	R	One	Each Control unit	-	
7.3	Water absorption	Annex-D	IS 17400	R	One	Once in a week	-	
7.3	Vertical Load bearing capacity	Annex-E	IS 17400	R	One	Each Control unit	-	
7.3	Out-of-plane moment capacity, Rib parallel to span	Annex-F	IS 17400	R	One	Each Control unit	-	
7.3	Out-of-plane moment capacity, Rib	Annex-F	IS 17400	R	One	Each Control unit	-	

	perpendicular to span						
7.3	Moh's hardness	-	IS 13630	R	One	Each Control unit	-
7.3	Fire resistance	-	IS/ISO 834 (part 4)	S	One	Once in six months	-
7.3	Glass Fibre content	Annex-G	IS 17400	R	One	Once in a week	-

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.