उत्पाद मैनुअल

जिप्सम सीलिंग टाईले,

आईएस १८३८७ : २०२३ के अनुसर

PRODUCT MANUAL
GYPSUM CEILING TILES,
ACCORDING TO IS 18387: 2023

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.**	:	18387: 2023
	शीर्षक / Title	:	Gypsum Ceiling Tiles
	संशोधनों की संख्या **No. of amendments**	:	Nil
2.	**नमूनाकरण दिशानिर्देश / Sampling Guidelines**		
a)	**कच्चा माल** **Raw material**	:	As per Clause 6 of IS 18387: 2023. *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.*
b)	**समूहीकरण दिशानिर्देश** **Grouping Guidelines**	:	Please refer **ANNEX – A**
c)	**नमूने का परिमाण** **Sample Quantity**	:	15 numbers of tiles. *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**	:	Same as the scope of the licence.

	Parameters to be Declared in Test Request		*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**	:	(i) Dimensions and Tolerances (Clause 7.1); (ii) Tolerance on Shape (Clause 7.2); (iii) Density (Clause 7.3); (iv) Finish (Clause 8) *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 18387 : 2023** with the following scope:

Name of the product	Gypsum Ceiling Tiles
Type	Type 1/Type 2/Type 3/ Type 4/Type 5/Type 6
Sizes (mm)	Upto and Including _____ (Length X Width)
Thicknesses (mm)	Upto and Including _____ (Thickness)
Edge profiles	Square edge (SE)/ Revealed edge (RE)/ Narrow revealed edge (NRE)/ Concealed edge (D2H)
Optional Test	With/Without (Sound transmission/ Thermal conductivity/ Fire resistance/ Sag), as applicable

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ANNEX -A
Grouping Guidelines

1. Gypsum Ceiling Tiles as per IS 18387 : 2023 is classified as below:

    a) Type : Type 1/Type 2/Type 3/ Type 4/Type 5/Type 6
    b) Sizes : Length X Width
    c) Thickness
    d) Edge profiles- Square edge (SE)/ Revealed edge (RE)/ Narrow revealed edge (NRE)/ Concealed edge (D2H)

2. Considering the above, Each Type (Type 1 to Type 6) shall be tested seperately to cover the respective type in the scope of the license.

3. The lowest and highest thicknesses of any size, any edge profile of slab shall be tested to cover the entire range of the thicknesses, including the tested thicknesses, for all sizes, all edge profiles of the tested types intended to be covered under the scope of the licence.

4. Example: If Type 1 gypsum ceiling tiles of 6 mm thickness with RE of any size and Type 4 gypsum ceiling tiles of 9.5 mm thickness with SE of any size are tested, then the scope of the licence may cover:

    - Type: Type 1 and Type 4
    - Thickness: from 6 mm upto and including 9.5 mm.
    - Edge Profiles: SE, RE, NRE and D2H
    - Sizes: All sizes intended to be covered under the scope of the licence.

5. One sample of each type of Gypsum Ceiling Tiles shall be tested for the optional test/tests to cover the same for that tested type in the scope of licence.

6. The Firm shall declare the varieties of tiles they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.

7. 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 7.1)	Measuring Tape Steel Scale Micrometer Vernier calliper
2.	Tolerance on Shape (Clause 7.2)	Square Straight Edge Feeler Gauge
3.	Density (Clause 7.3)	Metal rule Micrometer/dial gauge/caliper with anvil diameter Weighing balance Cutter Drying oven
4.	Flexural Breaking Strength (Clause 7.4)	Loading machine as per Cl D-2 of Annex-D of IS 2095-1 Cutter Weighing balance Conditioning chamber to maintain temperature of 27 ± 2 °C and humidity 65 ± 2 %
5.	Water Absorption (Clause 7.5)	Weighing balance Water bath Cutter Conditioning chamber to maintain temperature of27 ± 2 °C and humidity 50 ± 5 % Stop watch
6.	Sound Absorption (Clause 7.6)	Test facilities as per IS 8225
7.	Thermal Conductivity (Clause 7.7)	Test facilities as per IS 3346
8.	Humidified Deflection (Clause 7.8)	Zero-Plane Plate Conditioning chamber capable of operating at a temperature of 23 °C to 32 °C ± 1.5 °C and relative humidity of 50, 60, 70, 80 or 90 ± 2 percent Sample Test Frames Sag Bar with dial indicator
9.	Finish (Clause 8)	Micrometer Coating (film) Thickness Gauge. Test facilities as per IS 2542 (Part 2/ Sec 3) Test Facility as per IS 16719.

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 tiles of similar dimensions, construction, edge profiles and the type manufactured under similar conditions on the same day from same type of materials 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 tile provided always that the material so marked conforms to all requirements of the specification.

3.1 Marking on each tile shall be done as per Cl. 12 of IS 18387: 2023

3.2 **Additional Marking requirements**: Each tile 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.	**Requirement**	**Test Methods**		**No. of Sample**	**Frequency**	**Remarks**
		Clause	**Reference**			
6	Material	6, Table 4	IS 18387 IS 12679 IS 15489	One	Each consignment	No further testing is required if accompanied with the Test Certificate or ISI marked.
7.1	Dimensions and Tolerances	7.1	IS 18387	One	Each Control Unit	For each type of Gypsum Ceiling Tiles, as applicable.
7.2	Tolerance on Shape	7.2	IS 18387 IS 2095-1	One	Each Control Unit	
7.3	Density	7.3	IS 18387 IS 2095-1	One	Each Control Unit	
7.4	Flexural Breaking Strength	7.4	IS 18387 IS 2095-1	One	Each Control Unit	
7.5	Water Absorption	7.5	IS 18387 IS 2095-1	One	Once in a week	
7.6	Sound Absorption	7.6	IS 18387 IS 8225	One	Once in three months	
7.7	Thermal Conductivity	7.7	IS 18387 IS 3346	One	Once in three months	
7.8	Humidified Deflection	7.8, Annex B	IS 18387	One	Once in three months	
8	Finish	8	IS 18387 IS 2542 (Part 2/ Sec 3) IS 16719	One	Each Control Unit	