



**PRODUCT MANUAL FOR
GYPSUM BUILDING PLASTER – EXCLUDING PREMIXED
LIGHTWEIGHT PLASTER
ACCORDING TO IS 2547 (PART 1): 1976**

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.	Product	:	IS 2547 (Part 1) : 1976
	Title	:	GYPSUM BUILDING PLASTER – EXCLUDING PREMIXED LIGHTWEIGHT PLASTER
	No. of Amendments	:	3
2.	Sampling Guidelines:		
a)	Raw material	:	Not applicable
b)	Grouping guidelines	:	For considering GoL/CSoL, each classification and type shall be tested to cover that class/type in the licence.
c)	Sample Size	:	2 kg for all tests
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	Possible tests in a day :		
	(i) Loss of ignition (ii) Free lime (iii) Setting time- Neat plaster (iv) Residue on 150 μ sieve (v) SO ₃ (vi) CaO		
6.	Scope of the Licence : Please refer ANNEX- C		

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

S. No.	Tests used in with Clause Reference	Test Equipment
1.	Chemical analysis (Clause 4.1)	Ammonium Chloride Ammonia Solution Ammonium Nitrate Barium Chloride Citric Acid Calcium Carbonate Calcium Chloride Di-hydrate Calcium Sulphate Extra Pure Di- ammonium hydrogen phosphate Di - Ammonium Oxalate E D T A Solution N 50 Erio-chrom Black T Filter paper ordinary Filter Paper (Whatman) 40 Filter Paper (Whatman) 41 Filter Paper (Whatman) 42 Gypsum Extra Pure Grease Hydro Chloride Acid Litmus Paper Blue , Litmus Paper Red Methyl Red Indicator Nitric Acid Oxalic Acid Propan - 2- ol Potassium Hydroxide Potassium Permanganate Phenolphthalein Potassium Chloride P.H. Paper Patton and Reeder's Indicator Petroleum Jelly Rectified Spirit Sulphuric Acid Sodium Oxalate Sodium Chloride Sodium Carbonate Silver Nitrate Tri-Sodium Citrate

2	Loss on Ignition (Clause 4.1)	Muffle Furnace
3.	Consistency and Setting time (Clause 5.2)	Vicat Apparatus (with moulds and needles) Apparatus for Checking Consistency
4.	Transverse Strength (Clause 5.2)	Transverse Strength testing machine With Load Indicator Moulds Hollow Corrosion resistant metal cylinder
5.	Residue on 150 µm sieve (Clause 5.2)	Test Sieves
6	Soundness test (Clause 5.2)	Moulds Steamer Water Bath Steel Scale
7.	Mechanical resistance of set neat plaster (Clause 5.2)	Moulds Tube Ball
8.	Expansion on setting (Clause 5.2)	Extensiometer Bar Moulds Stop watch Room Thermometer Spatula
9	Other common lab equipments	Hot Air Oven Humidity Chamber S.S. Chamber Digital Flame photometer LPG Cylinder with regulator Balance Hot Plate Desiccators Weighing Balance Standard sand

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

ANNEX B

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 equipment.

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 2547 (Part 1): 1976.

4. CONTROL UNIT – All Gypsum building plaster of same class and type produced 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 Standard and covered by the licence should be marked with Standard Mark.

5.2 Routine analysis of various raw material going into the manufacturing of gypsum building plaster shall be made at intervals of a month or whenever there is change in the source or mine area stratification, whichever is earlier, and appropriate records of analysis and of the physical composition of the mixture shall be maintained.

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	Test Methods			No. of Sample	Frequency
		Clause	Reference			
4	Chemical Requirements					
4.1 Table 1(i)	SO ₃ percentage by mass	4.1	IS 2547 (Part 1) IS 1288	R	One	Daily composite from each control unit
4.1 Table 1 (ii)	CaO percentage by mass	4.1	IS 2547 (Part 1) IS 1288	R	One	Daily composite from each control unit
4.1 Table 1 (iii)	Soluble magnesium salts expressed as percentage of MgO	Appendix A	IS 2547(Part 1)	R	One	Daily composite from each control unit
4.1 Table 1 (iv)	Soluble sodium salts expressed as percentage of Na ₂ O	Appendix A	IS 2547(Part 1)	R	One	Daily composite from each control unit
4.1 Table 1 (v)	Loss of ignition percent by mass	Appendix B	IS 2547(Part 1)	R	One	Daily composite from each control unit
4.1 Table 1 (vi)	Free lime percent	Appendix C	IS 2547(Part 1)	R	One	Daily composite from each control unit
5	Physical Requirements					
5.1	Purity	5.1	IS 2547(Part 1)	R	One	Please refer clause 5.2 of SIT
5.2 Table 2 (i)	Setting time a) Plaster sand mixture b) Neat plaster	5.2	IS 2547 (Part 1)	R	One One	1. One sample from each class and type of gypsum building plaster from each kiln baked material 2. Daily composite
5.2 Table 2 (ii)	Transverse Strength	5.2	IS 2547 (Part 1)	R	One	Daily composite from each control unit

5.2 Table 2 (iii)	Soundness	5.2	IS 2547 (Part 1)	R	One	Daily composite from each control unit
5.2 Table 2 (iv)	Mechanical Resistance of set neat plaster	5.2	IS 2547 (Part 1)	R	One	Daily composite from each control unit
5.2 Table 2 (v)	Residue on 150 μ m sieve percentage	5.2	IS 2547 (Part 1)	R	One	Daily composite from each control unit
5.2 Table 2 (vi)	Expansion on setting percentage	5.2	IS 2547 (Part 1)	R	One	Daily composite from each control unit

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.

ANNEX- C**Scope of the Licence**

"Licence is granted to use Standard Mark as per IS 2547 (Part 1) : 1976 with the following scope:	
Name of the product	GYPSUM BUILDING PLASTER – EXCLUDING PREMIXED LIGHTWEIGHT PLASTER
Class/ Type	a) Plaster of Paris β Hemihydrate (Type A) b) Retarded Hemihydrate Gypsum Plaster (Type B) <ul style="list-style-type: none"> • Type I - Under Coat - Browning Plaster - Metal Lathing Plaster • Type II - Final Coat Plaster - Finish Plaster - Board Finish Plaster c) Anhydrous Gypsum Plaster d) Keene's Plaster