



PRODUCT MANUAL FOR CEMENT BONDED PARTICLE BOARDS ACCORDING TO IS 14276 : 2016

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 14276 : 2016
	Title	:	CEMENT BONDED PARTICLE BOARDS
	No. of Amendments	:	NIL
2.	Sampling Guidelines:		
a)	Raw material	:	As per clause 4 of IS 14276 : 2016
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	2 boards of full size
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 :		
	(i) Finish (Clause 6) (ii) Dimensions and tolerances (Clause 7) (iii) Workability (Clause 8.5) (iv) Screw withdrawal strength (Clause 10.10)		
6.	Scope of the Licence :		
	Licence is granted to use Standard Mark as per IS 14276 : 2016 with the following scope:		
	Name of the product	CEMENT BONDED PARTICLE BOARDS	
	Sizes	Upto and including --- mm thickness	

ANNEX - A

Grouping Guidelines

1. Cement bonded particle boards covered in IS 14726 : 2016 are classified as given below:
 - a) Dimensions : Length – 2440 mm and 3050 mm
Width – 1200 mm
(Any other dimension i.e. length and width as agreed to between the manufacturer and the purchaser is permitted).
 - b) Thickness: 6 mm, 8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm, 30 mm and 40 mm
2. For considering GoL/CSoL, the guidelines given below shall be followed:

One sample having the highest thickness shall be tested for all requirements to cover all the sizes (Length and Width) and thickness upto and including the thickness tested.
3. The Firm shall declare the varieties of cement bonded particle board 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 varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX B**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.	Dimensions and tolerance (Clause 7 and 10.2)	Stainless Steel Scale Measuring Tape Vernier Caliper Micrometer Right Angle Straightness gauge
2.	Density (Clause 8.1 and 10.3)	Hot air oven Weighing balance Moisture meter
3.	Moisture content (Clause 8.2 and 10.4)	Hot air oven Weighing balance Moisture meter
4.	Water absorption (Clause 8.3 and 10.5)	Water bath Soluble sealant material such as wax
5.	Swelling in water (Clause 8.4 and 10.6)	Water bath Soluble sealant material such as wax Arrangement for measurement of change in length
6	Workability (Clause 8.5)	Cutting tools Saws and sawing tools Drilling machine Tungsten carbide tipped cutter Drum sanding machine Equipment for nailing etc.
7.	Modulus of Rupture and Modulus of Elasticity (Clause 10.7 and 10.8)	Tensile testing machine with bend facility and with attachment for static bending test and with variable speed Extensometer/Dial gauge Water bath Temperature controlled cabinet to maintain temperature 27 ± 2 °C Vernier caliper
8.	Tensile strength perpendicular to surface (Clause 10.9)	Loading fixture for tension test perpendicular to surface Water bath Temperature controlled cabinet to maintain temperature 27 ± 2 °C Vernier caliper

9	Screw withdrawal strength (Clause 10.10)	Screws Tensile testing machine
10	General test equipments	Stop watch Thermometer Air conditioner Drill machine Sample cutter Humidity chamber Weighing balance

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 14276:2016

4. CONTROL UNIT – 1000 cement bonded particle boards or part thereof of the same thickness manufactured on the same 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	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4	Material	4.1, 4.2	IS 14276	S	One	Each Consignment	\$
6	Finish	6	IS 14276	R	Each finished board		-
7 and 10.2	Dimensions and tolerances	7, 10.2	IS 14276 IS 2380 (Part 2)	R	One	Each hour production	#
8.1 and 10.3	Density	8.1, 10.3	IS 14276 IS 2380 (Part 3)	R	One	Each control unit	-
8.2 and 10.4	Moisture content	8.2, 10.4	IS 14276 IS 2380 (Part 3)	R	One	Each control unit	-
8.3 and 10.5	Water Absorption	8.3, 10.5	IS 14276 IS 2380 (Part 16)	R	One	Each Control unit	-
8.4 and 10.6	Swelling in water	8.4, 10.6	IS 14276 IS 2380 (Part 17)	R	One	Each Control unit	-
8.5	Workability	8.5	IS 14276	R	One	Each Control unit	-
10.7 and Table 1	Modulus of rupture	10.7	IS 14276 IS 2380 (Part 4)	R	One	Each Control unit	-

10.8 and Table 1	Modulus of Elasticity	10.8	IS 14276 IS 2380 (Part 4)	R	One	Each Control unit	-
10.9 and Table 1	Tensile strength perpendicular to surface	10.9	IS 14276 IS 2380 (Part 5)	R	One	Each Control unit	-
10.10 and Table 1	Screw withdrawal Strength	10.10	IS 14276, IS 2380 (Part 14)	R	One	Each Control unit	-

\$ No further testing is required, if additives are accompanied with supplier's test certificate for its conformity to respective Indian Standard or conformity to the requirements specified by the manufacturer. Alternatively, if test certificate is not available, one sample from each lot received shall be tested for specified requirements.

In case of failure of the sample in dimensional requirements, all boards manufactured during one hour shall be checked for dimensional requirements and those conforming to the requirements shall be marked. Resizing of rejected boards to lower dimensions may be permitted, only if these boards meets all other requirements specified in the standard after eliminating the defective portion of the board.

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.