



उत्पाद मैनुअल

भा. मा. 16058: 2024 के अनुसार

वेयरहाउसिंग उपयोग के लिए पुनर्निविनिकृत पैकेजिंग अपशिष्ट से बने डनेज पेलेट के लिए
दस्तावेज संख्या-पी एम/आई एस 16058/1/अगस्त 2024

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति औरपारिशिता की सुसंगतता सुनिश्चित करनेके लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी 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 DUNNAGE PALLETS MADE FROM RECYCLED PACKAGING WASTES FOR WAREHOUSING APPLICATION ACCORDING to IS 16058:2024

Document No.-PM/IS 16058/1/ Aug 2024

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 16058: 2024
	Title	:	Dunnage Pallets made from Recycled Packaging Wastes for Warehousing Application
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	As per Cl. 4 of IS 16058: 2024 (Material used shall be declared by the manufacturer)
b)	Grouping guidelines	:	Please refer ANNEX –B
c)	Sample Size	:	12 Pallets
3.	List of Test Equipment	:	Please refer ANNEX – C
4.	Scheme of Inspection and Testing	:	Please refer ANNEX –D
5.	Possible tests in a day	:	Construction (Cl. 9), Design (Cl. 10), Dimensions (Cl. 11), Workmanship (Cl. 12), Finish (Cl. 13), Density (Cl. 17.1), Tensile Stress at proportional limits, at maximum load and MoE in tension parallel to grain (Cl. 17.2 and Annex-B), Falling impact strength (Cl. 17.2 and Annex- C), Compression parallel to surface (Cl. 17.2 and Annex D), Moisture (Cl. 17.2 and Annex- E)
6.	Scope of the Licence:	:	Licence is granted to use Standard Mark as per IS 16058:2024 with the following scope:
	Name of product	:	Dunnage Pallets made from Recycled Packaging Wastes for Warehousing Application
	Type of Dunnage Pallet	:	A-1/A-2/B
	Size (s)	:	1500 x 900 / 1200 x 600 etc.

ANNEX -A

Grouping Guidelines

1. “Dunnage Pallets made from Recycled Packaging Wastes for Warehousing Application” as per IS 16058: 2024 are classified into types based on Static Load Capacity (kg per sq.ft) and Size.

(a) Type of pallet:

- Type A
 - Type A-1 (Indoor heavy-duty pallet)
 - Type A-2 (Indoor medium duty pallet)
- Type B

(b) Size (Length x Width) of pallets for different types of pallets shall be as per IS 16058: 2024.

2. Considering the above, samples of each type of pallet shall be tested. Sample of highest size of pallet offered shall be tested to cover the lower sizes of that type of pallet in scope, provided the raw material used is same.
3. The Firm shall declare the varieties of Pallets 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 material, sizes and types covered in the Licence are tested in rotation, to the extent possible.

ANNEX-B
List of Test Equipment

Guidance list of major test equipment required to test as per the Indian Standard

S.no.	Tests used in with Clause Reference		Test Equipment
	Cl. No.	Test	
1.	11	Dimension	• Steel scale • Vernier caliper • weighing scale
2.	15.1	Stacking test using static load	• Horizontal flat surface according to Cl. 15.1.2 • Superimposed load based on surface area of pallet according to Table 4
3.	15.2	Vertical impact drop test	• Lifting arrangement, release mechanism, impact surface as per Cl. 15.2
4.	15.3	Corner drop test	• Testing arrangement as per Cl. 15.3
5.	15.4	Hammer test	• Metallic plate of size equivalent to dimension of pallet having dead weight of 60 kg. • Device to lift the metallic plate with release mechanism.
6.	15.5	Load bearing test	• Jute bags or plastic woven sacks of specified sizes having 50 kg capacity. • Arrangement to lift the Jute bags to a height of 6 feet.
7.	17.1	Density	• Weighing Balance • Vernier Caliper • Steel Scale
8.	17.2, Annex B	Tensile stress at proportional limits, Tensile stress at max. load, MOE in tension parallel to grain	• Specimen cutter as per Fig. 10 and Fig. 11 • Tensile testing machine

9.	17.2, Annex C	Falling hammer impact strength test	• Conditioning Chamber • Testing arrangement as per annex - C
10.	17.2, Annex D	Compression parallel to surface test	• Spherical self-aligning type loading block • Universal Tensile Testing machine
11.	17.3, Annex- E	Moisture content	• Weighing balance • Ventilated Oven
12.	17.2, Annex -F	Water absorption test	• Conditioning chamber • Weighing Balance • Vernier Caliper • Suitable water bath • Oven
13.	17.2, Annex- G	Acidity and alkalinity resistance test	• Glacial Acetic acid • Distilled water • Beaker • Weighing Balance • Sodium Carbonate Anhydrous • Conditioning Chamber
14.	14	Conditioning	• Conditioning Chamber

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 manufacturers (licensees/applicants) will implement a Quality Assurance Plan 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 defining the control unit i.e. Batch and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4 below.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 **Control Unit:** For the guidance of manufacturers, the recommended definition of Control Unit is quantity of Pallets of same size and type, manufactured under similar conditions from same consignment of raw material in a day.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

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. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in-house laboratory (In-house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer, and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in-house as “R” or other tests which can be sub-contracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) also is optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster-based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. LABELLING AND MARKING – As per the requirement of IS 16058:2024. The Standard Mark, as given in the Schedule of the licence, shall be marked on each Pallet provided always that the product thus marked conforms to all the requirement of the specification. In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place on product or package as follows: “For details of BIS certification please visit www.bis.gov.in”.

4. REJECTION - All the production which conforms to the Indian Standard and covered under scope of the licence shall be marked with 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

(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	Packaging waste as raw Material	4	IS 16058	S	One	Each Consignment	Raw material used shall be declared by the manufacturer
8.2	Requirements of fasteners	8.2	IS 16058	R	Each pallet		
9	Construction	9	IS 16058	R			
10	Design	10	IS 16058	R			
11	Dimensions	11, Table 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.8, 2.9, 2.10	IS 16058	R			
12	Workmanship	12	IS 16058	R			
13	Finish	13	IS 16058	R			
15.1	Stacking test using static load	15.1	IS 16058	S	Two	Once in 6 months	
15.2	Vertical impact drop test	15.2	IS 16058	S	One	Once in 6 months	
15.3	Corner drop test	15.3	IS 16058	S	One	Once in 6 months	

15.4	Hammer test	15.4	IS 16058	S	One	Once in 6 months	
15.5	Load bearing test	15.5	IS 16058	S	One	Once in 6 months	
17.1	Density of plank	17.1 Annex A	IS 16058	R	One	Each control unit	
17.2	<i>Mechanical test on top and bottom plank</i>						
	Tensile testing	17.2 Annex-B	IS 16058	S	One	Once in 6 months	
	Falling impact strength test	17.2 Annex-C	IS 16058	S	One	Once in 6 months	
	Compression parallel to surface test	17.2 Annex-D	IS 16058	S	One	Once in 6 months	
17.3	<i>Chemical test on top and bottom plank</i>						
	Moisture	17.3 Annex E	IS 16058	S	One	Once in 6 months	
	Water absorption (2 hr)	17.3 Annex F	IS 16058	S	One	Once in 6 months	
	Water absorption (24 hr)	17.3 Annex F	IS 16058	S	One	Once in 6 months	
	Acidity and alkalinity test	17.3 Annex G	IS 16058	S	One	Once in 6 months	