



CORRUGATED FIBRE BOARDS & BOXES

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Equivalent/Comparable Standards:

1. INDIAN : IS: 2771 (Part-1) - 1990.

Acceptable Suppliers & Grades:

User Plants & Replaced Plant Specifications/References:

1. BHOPAL : IS: 2771

Revision: As per 5th meeting of WG (T&PM)			Approved: INTERPLANT MATERIAL RATIONALISATION COMMITTEE - WG (T&PM)		
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CORPORATE PURCHASING SPECIFICATION

AA 514 14

REV. No. 02

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CORRUGATED FIBRE BOARDS AND BOXES1. GENERAL:

This specification governs the quality requirement of corrugated fibre boards, (sheets) and boxes.

2. APPLICATION:

Used as a cushioning material for general packaging purposes.

3. COMPLIANCE WITH NATIONAL STANDARDS:

The material shall comply with the requirements of the following National standard and also meet the requirements of this specification.

IS: 2771(Part-1)-1990) Corrugated fibre board boxes

4. DIMENSIONS & TOLERANCES:

As stated on order

5. CORRUGATIONS:

Double walled corrugated & B-flute (Narrow). If any other corrugation type is required, this shall be specified on our order.

6. MANUFACTURE:6.1 BOARDS:

Boards shall consist of one or more sheets of fluted paper (fluting) stuck or interposed between two or more flat sheets of paper or board (liners), usually kraft. The liner or liners may be laminated with suitable adhesive capable of firmly adhering the various plies together. Sodium silicate or any other highly alkaline adhesive shall not be used.

6.2 BOXES:

As stated on order.

7. TEST SAMPLES:

One sheet/box shall be taken for testing and approval.

8. PROPERTIES:

The test samples shall show the following properties when tested in accordance with the relevant clauses shown against each.

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8.1 BURSTING STRENGTH (IS:2771:Part-1):

Type of Corrugated Board.	Mass Content Kg., Max.	Combined Internal Dimensions(L+W+D) mm, Max.	Bursting Strength (Kgf/cm ²),Min.
Single wall or 3 ply	5	635	6
	8	750	8
	10	1025	9
Double wall or 5 ply	15	1275	10
	20	1525	12
	25	1575	13
Triple wall or 7 ply	30	1650	14
	40	1775	17
	55	1900	24
	75	2150	29

Note:

1. Boxes should be made with no single dimension exceeding 50 percent of the combined internal dimensions.
2. For calculating the maximum combined dimensions for any intermediate mass content, for each 10 percent reduction in mass of contents below the maximum permitted for a box, the calculated combined dimensions from the table may be increased by 5 percent.

8.2 WATER ABSORPTION (IS:4006:Part-1,Method 6):

The increase in the mass of the board after the test shall not be more than 155 g/sq.m.

8.3 FLAP BEND:

The flaps shall not crack at the crease when bent through 90° inside and 90° out side. This test shall not be applicable to triple-wall or 7-ply boxes.

8.4 JOINT STRENGTH FOR BOXES:

The strength of the joint shall be observed by grasping a body or a cover in the hands, one on each side of the joint, and pulling it apart until the joint ruptures. The failure shall occur in the board and not in the fasteners. This test shall not be applicable for triple wall or 7-ply boxes.

9. RETESTS:

If only one box from the test sample fails to meet one or more of the test requirements of this specification further boxes shall be selected at random from the same consignment of boxes for testing for the defective property or properties. The number of additional boxes to be tested shall be twice the number from which the box from the original test sample fail.

**10. INSPECTION AT SUPPLIER'S WORKS:**

Whenever specified, tests and inspection are to be conducted in the presence of BHEL's representative. BHEL representative shall have free access at all times while work on the contract is being performed to all parts of the manufacturer works. The manufacturer shall offer BHEL's representative all reasonable facilities, without charge, to satisfy the latter that the material is being furnished in accordance with this specification.

The manufacturer shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities are not available at his works the manufacturer shall make necessary arrangements for carrying out the prescribed tests elsewhere. The manufacturer shall notify BHEL in advance about the readiness of the material for inspection and testing.

BHEL reserves the right to test the material at BHEL's Works and the final acceptance of the material shall be based on these test results.

11. TEST CERTIFICATES:

Three copies of test certificate shall be supplied unless otherwise stated on the order.

In addition, supplier shall ensure to enclose one copy of test certificate along with their dispatch documents to facilitate for quick clearance of the material.

The test certificate shall have the following information:

AA 514 14 (Rev.No.02) : Corrugated Fibre boards/boxes
BHEL order No. :
Supplier's References :
Type of corrugation :
Results of Dimensional Inspection :
Test results as per clause 8 :

12. PACKING AND MARKING :

The board material shall be packed in bundles of 50 sheets, whereas the boxes shall be packed and supplied as agreed between BHEL and manufacturer. Each bundle/box shall be legibly marked with the following:

Spec. No. AA 514 14
BHEL order No. :
Supplier's Name :
Quantity supplied :

13. REJECTION AND REPLACEMENT :

In the event of any board material/box proving defective during the course of preparation, testing or erection such material/box shall be rejected notwithstanding any previous certification of satisfactory testing and/or inspection. The supplier shall under take to replace the rejected consignment at his own cost and the rejected material shall be taken back by the supplier after fulfilling the commercial terms and conditions.

14. REFERRED STANDARDS:

The following is the list of the latest standards, as published by the respective issuing bodies, referred to in this specification.

- 1) IS: 4006 Part-1