

भारतीय मानक मसौदा

निर्यात के लिए चाय के लिए मल्टीवॉल पेपर बोरे – विशिष्टि  
(पहला पुनरीक्षण)

*Draft Indian Standard*

**MULTIWALL PAPER SACKS FOR TEA FOR EXPORT— SPECIFICATION**  
(*First Revision*)

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ICS 85.060

Paper based packaging materials Sectional  
Committee, CHD 16

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## FOREWORD

*(Formal clauses to be added later)*

Plywood tea chests have been the traditional mode for packing of tea in bulk. However, plywood is a commodity that has become increasingly scarce and costly and environmentalists are alarmed at the prospects of dwindling forest resources in the country. Besides, tea importing countries have a problem of disposal of empty chests.

This has resulted in the Tea Industry turning to other alternatives that are more freely available and cheaper. Of all the various alternatives that have been tried and considered, the multiwall paper sack with an inner-most ply bonded to aluminium foil with the help of polythene has gained widest acceptance, providing as it does, protection from moisture and odour and allowing for the palletization and containerization during transportation. Studies carried out in various parts of the world with newer and more effective materials could well lead to the development and use of other materials from which sacks capable of withstanding all distribution hazards can be produced. The present standard, however, is confined to specifications for multiwall paper sacks for the export of tea and is essentially based on paper sacks which are at present being used by several tea producing countries in large numbers for export packing.

This standard was first published in 2005. In this revision, the construction requirements like number of plies, gsm of kraft paper and dimensional requirements of empty sacks have been modified based on current practices.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:1960 'Rules for rounding off numerical values (*revised*)'.

The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## **1 SCOPE**

**1.1** This standard prescribes requirements for materials, dimensions and construction of multiwall (multi-ply) paper sacks of tea depending on the practice of the importing countries. These are to be designated as full size to hold about 50 kg of tea, medium size to hold about 35 kg of tea and half size to hold about 28 kg of tea.

## **2 REFERENCES**

**2.1** The standards listed in Annex A contain provisions which through reference in this text, constitute provisions of and necessary adjuncts to this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

## **3 TERMINOLOGY**

For the purpose of this standard the definitions given in IS 9028 shall apply.

## **4 MATERIAL**

**4.1** The sacks shall be made of natural sack kraft paper or extensible sack kraft paper conforming to IS 13012.

### **4.2 Adhesives**

Adhesives commonly used are of the starch or dextrans type but if a fungicide/bactericide is required as an additive, chlorophenols shall not be used.

## **5 CONSTRUCTION AND STYLE**

**5.1** The sack shall be of the pasted-valve type with flat hexagonal ends of stepped end construction formed from a stepped end tube. The valve shall be fitted with an external tuck-in sleeve and shall be made of the same material as the barrier of the innermost ply.

**5.2** The sack shall comprise of 4 plies of natural sack kraft paper each of 70-80 gsm or extensible kraft paper each of 70-80 gsm. The innermost ply shall be laminated with aluminium foil of 0.007 mm to 0.009 mm thickness by 20 gsm of polyethylene. However, by mutual agreement with the purchaser, number of plies and/or substance of the paper may be altered by using paper of higher strength and also alternative barriers like metallized film, etc, may be used so long as the desired properties of tea packaging is ensured.

**5.2.1** All materials used in the construction of the sack (paper, adhesive, polyethylene and aluminium foil) shall be free from taint and odour.

**5.2.2** No materials or substances containing chlorophenols or their derivatives shall be used.

### **5.3 Lay Flat Dimensions**

The empty sack dimensions shall be as given below:

<i>Full Size</i>	
Sack length	1120 ± 10 mm
Sack width	720 ± 5 mm
Width of bottom	180 ± 5 mm
Valve sleeve width	180 ± 5 mm

<i>Medium Size</i>	
Sack length	780 ± 10 mm
Sack width	610 ± 5 mm
Width of bottom	190 ± 5 mm
Valve sleeve width	190 ± 5 mm

<i>Half Size</i>	
Sack length	660 ± 10 mm
Sack width	610 ± 5 mm
Width of bottom	190 ± 5 mm
Valve sleeve width	190 ± 5 mm

#### 5.4 Drop Test

Multiwall paperbacks for tea for export with full content shall pass the drop test with following criteria:

Drop height: 1.2m

Number of drops: 4

First and second drop shall be on either surface (front or rear) of the sack. Third and fourth drop shall be on top end and bottom end, where valve is fitted or pasted.

### 6 WORKMANSHIP

**6.1** The plies shall be properly but not excessively creased. In the construction of a multiwall paper sack tube, the outer ply fit shall be such that at the point of manufacture, each ply shall be smaller in circumference than the next outer ply within the elongation limits of the material in order to ensure even load distribution between plies. Care shall be taken to ensure for adequate longitudinal overlap, equal gusset formation and spot gluing quantity and line of gluing.

#### 6.2 Conditioning

The paper sack sample from the lot for testing shall be conditioned as per IS 1060 (Part 1).

**7 PACKING AND MARKING****7.1 Packing**

Paper sacks shall be securely packed as agreed to between the purchaser and the supplier.

**7.2 Marking**

**7.2.1** Each package shall be marked with the following information:

- a) Relevant product details including sack size,
- b) Name of the manufacturer,
- c) Number of sacks in the package,
- d) Batch number/Lot number, and
- e) Net mass of the contents.

**7.2.2** Each sack shall be marked with 'USE NO HAND HOOKS', preferably showing the corresponding pictorial illustration as per IS 1260 (Part 2).

**7.2.3** *BIS Certification Marking* — Each package may also be marked with the Standard Mark.

**7.2.3.1** The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the BIS Act, 2016 and the Rules and Regulations framed there under, and the products may be marked with the standard mark.

**8 SAMPLING**

Sampling shall be done as per procedure laid down in IS 10528.

**ANNEX A**  
(Clause 2)

**LIST OF REFERRED INDIAN STANDARDS**

<i>IS No.</i>	<i>Title</i>
IS 1060 (Part 1):1966	Methods of Sampling and Test for Paper and Allied Products: Part 1
IS 1260 (Part 2):2020	Packaging — Distribution Packaging — Graphical Symbols for Handling and Storage of Packages Part 2 General Goods
IS 9028:1978	Glossary of terms relating to paper sacks
IS 10528:1983	Method of sampling empty paper sacks for testing
IS 13012:1990	Sack kraft paper and extensible kraft paper - Specification