

भारतीय मानक मसौदा  
एक बार प्रयुक्त कार्बन कागज के लिए आधार  
कागज — विशिष्टि  
(पहला पुनरीक्षण )

*Draft Indian Standard*  
**BASE PAPER FOR ONE - TIME CARBON  
PAPER — SPECIFICATION**  
( *First Revision* )

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ICS 85.040

Paper and Its Products Sectional Committee,  
CHD 15

**Last date of comments: 15<sup>th</sup> December  
2023**

## FOREWORD

*Formal clauses to be added later*

The Indian standard on one-time carbon paper, namely, IS 9055 : 1979 'Specification for one-time carbon paper' has already been published. Since special quality of base paper is required for one-time carbon papers, it was felt necessary to formulate a standard for this type of paper which is now being manufactured in the country.

It is felt that this standard will help the manufacturers to produce good quality base paper and ensure supply of proper quality one-time carbon paper to the consumer.

This revision has been brought out to bring the standard in the latest style and format of Indian Standards. In this revision, references have been updated, requirements for nominal grammage, tensile index and burst index have been modified, tolerance for nominal width has also been changed. Criteria for eco mark for packaging material has been updated.

A scheme for labelling environment friendly products to be known as ECO Mark was introduced in the standard at the instance of the Ministry of Environment, Forests & Climate Change (MoEF&CC). The ECO Mark is administered by the Bureau of Indian Standards (BIS).

The composition of the committee responsible for the formulation of this standard is listed in Annex A.

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 : 2022 'Rules for rounding off numerical values ( *second revision* )'. 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

This standard prescribes the requirements and the methods of sampling and tests for base paper for one-time carbon paper.

## 2 REFERENCES

The Indian Standards listed below are necessary adjuncts to this standard :

<i>IS No.</i>	<i>Title</i>
IS 1060 (Part 1) : 2022	Methods of Sampling and Test for Paper and Allied Products Part 1 Test Methods for General Purpose ( <i>second revision</i> )
IS 1260 (Part 2) : 2020	Packaging — Distribution Packaging — Graphical Symbols for Handling and Storage of Packages Part 2 General Goods ( <i>fourth revision</i> )
IS 1398 : 1982	Packing paper, waterproof, bitumen laminated ( <i>second revision</i> )
IS 4006 ( Part 2 ) : 1985	Methods of test for paper and pulp based packaging materials : Part 2 ( <i>first revision</i> )
IS 4661 (Part 5) : 2022	Paper, Board, Pulps And Related Terms — Vocabulary Part 5: Properties Of Pulp, Paper And Board ( <i>third revision</i> )

## 3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 4661 : 1986, shall apply.

## 4 REQUIREMENTS

### 4.1 General Requirements

The paper shall be of good formation. It shall have close texture, smooth and even surface, and fairly good opacity. It shall be free from slack and tight edges and, as far as possible, from pinholes, thin spots, cockles and creases.

**4.2** This base paper shall be supplied in evenly wound rolls preferably with the wire side of the paper inside. The number of joints in a reel on an average shall not exceed one joint per 2 000 m in length. This average shall be calculated on 20 reels selected at random. Splices should be marked.

**4.2.1** The GSM of paper shall be within the range of 19 GSM with a tolerance of  $\pm 2$  GSM.

**4.3** The base paper shall also comply with the requirements given in Table 1 when tested according to the test method specified in col 4 of the table.

**Table 1 Requirements for Base Paper for  
One-Time Carbon Paper**  
( Clause 4.3 )

Sl No. (1)	Characteristic (2)	Requirement (3)	Method of Test, Refer to (4)
i)	Nominal grammage, g/m <sup>2</sup>	19.0	6 of IS 1060 (Part 1) : 2022
ii)	Tensile index* MD,N. m/g, <i>Min</i>	30.0	12.3 of IS 1060 (Part 1) : 2022
iii)	Burst index† kPa. m <sup>2</sup> /g, <i>Min</i>	1.5	12.5 of IS 1060 (Part ) : 2022
iv)	Porosity, sec/100 ml, <i>Min</i>	100.0	13 of IS 4006 (Part 2) : 1985
v)	Opacity, percent, <i>Min</i>	40.0	16 of IS1060 (Part) : 2022

\*Tensile index = breaking length × 0.009 8  
†Burst index = burst factor × 0.098.

#### 4.4 Width

The width of rolls shall be as agreed to between the purchaser and the supplier. The tolerance on nominal width shall be as follows:

<i>Nominal Width</i>	<i>Tolerance</i>
mm	mm
Up to 150	± 2.0
Above 150	± 2.5

#### 4.5 Additional Requirements for ECO Mark

##### 4.5.1 General Requirements

**4.5.1.1** The product shall conform to the requirements for quality and performance prescribed under clauses 4.1 to 4.4.

**4.5.1.2** The manufacture shall produce to BIS, the environmental consent clearance from the concerned State Pollution Control Board as per the provisions of *Water (Prevention and Control of Pollution) Act, 1974* and *Air (Prevention and Control of Pollution) Act, 1981* along with the authorization, if required, under the *Environment (Protection) Act, 1986* and the ales made thereunder, while applying for ECO Mark. Additionally the manufacturers shall also comply with the provisions under *Prevention of Food Adulteration Act, 1954* and the Rules made thereunder wherever necessary.

##### 4.5.2 Specific Requirements

**4.5.2.1** The material shall be of the following two types depending on the raw material used in the manufacture:

- a) *Type A* — Manufactured from pulp containing not less than 60 percent by mass of pulp made from materials other than bamboo, hard woods, soft woods and reed.

b) *Type B* — Manufactured from pulp made from 100 percent waste paper.

## **5 PACKING AND MARKING**

### **5.1 Packing**

The paper roll shall be packed securely in a layer of polyethylene coated kraft paper followed by bitumen-laminated water-proof packing paper ( *see* IS 1398 : 1982 ). The rolls may also be put in wooden crates if agreed to by the purchaser and the supplier.

**5.1.1** For ECO Mark, the product shall be packed in such packages which shall be recyclable/reusable or biodegradable.

### **5.2 Marking**

Each package shall be marked with the following information:

- a) Description of the material;
- b) Grammage of paper;
- c) Mass of package;
- d) Lot and batch number;
- e) Month and year of manufacture;
- f) Indication of the source of manufacture; and
- g) For consignments to be transhipped, the pictorial marking ‘use no hooks’ as contained in IS 1260 ( Part 2 ) : 2020 shall be stencilled or indelibly marked on the rolls.

**5.2.1** For ECO Mark, following additional information may also be marked on the container/package:

The criteria for which the product has been labelled with ECO Mark.

#### **5.2.2 *BIS Certification Marking***

The product shall also be marked with Standard Mark

**5.2.2.1** The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed there under, and the products may be marked with the Standard Mark.

## **6 SAMPLING**

**6.1** Representative samples for test shall be drawn as prescribed in **3** of IS 1060 ( Part 1 ) : 2022.

### **6.2 Number of Tests**

Each of the selected packages shall first be tested for the requirements given in **4.2**. Then from each of these packages number of sheets sufficient to carry out all the tests specified in Table 1 shall be taken out at random. These sheets shall constitute the sample. These sheets shall first be examined for the requirements given in **4.1** and **4.4** and then number of test pieces for each of the characteristics as indicated in its test method shall be cut from them. These pieces shall be tested according to the methods specified in col 4 and 5 of Table 1. For requirement for tolerance on grammage given in **4.3.1**, three test pieces selected for each package shall be tested and the average value of these specimens shall conform to the relevant requirement specified.

### **6.3 Criteria for Conformity**

**6.3.1** A sheet not meeting the relevant requirements for any one or more characteristics shall be considered as defective.

**6.3.2** A lot shall be declared as conforming to the requirements of this specification if the number of defective sheets found does not exceed the acceptance number. This acceptance number shall depend upon the size of the sample and shall be equal to 0 if the size is less than 13, and 1 if the size is greater than or equal to 13.