

भारतीय मानक मसौदा  
मोचन आधार कागज़ — विशिष्टि  
(पहला पुनरीक्षण)

**Draft Indian Standard**  
Release Base Paper — Specification  
( *First Revision* )

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ICS 85.060; 01.040.85

Paper and its Products Sectional Committee,  
CHD 15

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FOREWORD

*(formal clause shall be added later)*

Release base paper is used for the manufacture of release paper, which in turn is used for pressure sensitive labels, stickers for rubber products, food products, plastic products and petrochemical products. Usually, super calendered sulphite base paper is utilized for the preparation of release base paper. It is also known as silicone base paper.

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 and Climate Change (MoEF&CC). The ECO-Mark is administered by the Bureau of Indian Standards (BIS).

Considering the recent technological advancements, the Committee decided to revise this standard.

In this first revision, the following modifications have been incorporated:

- The references clause has been updated;
- The product has been categorised into two grades based on manufacture and grammage of paper. The description clause for these two grades have also been introduced;
- Requirements for Gurley Porosity, Smoothness, Bendsten, Tear index, and Burst index have been updated;
- A new requirements of Gloss has been incorporated
- The test methods have been updated; and
- The amendments have been amalgamated.

This standard contains **6.1.1** which call for agreement between the purchaser and the supplier.

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.

*Draft Indian Standard*

RELEASE BASE PAPER — SPECIFICATION

( *First Revision* )

**1 SCOPE**

This standard prescribes requirements and methods of sampling and test for release base paper intended for the manufacture of release paper.

**2 REFERENCES**

The standards listed in Annex A contain provisions, which through reference in this text, constitute provisions of 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 edition of these standards.

**3 TERMINOLOGY**

For the purpose of this standard, the definitions of terms given in IS 4661 (Part 4) shall apply.

**4 GRADES**

The release base paper shall be of following two grades:

- a) Grade 1 — Glassine release base paper with grammage 40 gsm to 120 gsm; and
- b) Grade 2 — Clay coated kraft (CCK) release base paper with grammage 60 gsm to 120 gsm.

**5 REQUIREMENTS**

**5.1 General**

**5.1.1** The release base paper shall be free from pin holes, slime holes, stock lumps, wrinkles, calender cuts, dirt particles and colour marks.

**5.1.2** *Glassine Papers*

The glassine papers shall be super calendered with uniform caliper, high transparency and siliconisable on both sides. It may be in multiple colours,

**5.1.3** *CCK Papers*

It shall have good dimensional stability, uniform caliper, low hygro expansion with clay coating on front side. It may be matt finish or gloss finish.

**5.2 Grammage (Substance)**

**5.2.1** The grammage of the release base paper shall be as follows when tested according to the method prescribed in IS 1060 (Part 5/Sec 5):

- a) Grade 1 — 40 g/m<sup>2</sup> to 120 g/m<sup>2</sup>; and
- b) Grade 2 — 60 g/m<sup>2</sup> to 120 g/m<sup>2</sup>

**5.2.2** No test result obtained from individual test piece shall vary by more than  $\pm 6$  percent of the nominal grammage. Further, the mean of 10 test results shall not vary from the nominal grammage by more than  $\pm 4$  percent.

**5.3** In addition to the above requirements, the paper shall also comply with the requirements given in Table 1 when tested in accordance with the method referred to in col (5) of Table 1.

**Table 1 Requirements for Release Base Paper**  
(Clause 5.3)

SI No.	Characteristics	Requirements		Methods of Tests, Ref to
		Grade 1	Grade 2	
(1)	(2)	(3)	(4)	(5)
i)	Density, g/cm <sup>3</sup> , <i>Max</i>	1.2	1.2	IS 1060 (Part 5/Sec 3)
ii)	Gurley Porosity, sec/100 ml, <i>Min</i>	1800	36000	IS 1060 (Part 5/Sec14)
iii)	Smoothness, Bendsten ml/min, <i>Max</i>			IS 1060 (Part 5/Sec 20)
	a) Top Side	60	60	
	b) Bottom Side	80	150	
iv)	Tensile index, Nm/g, <i>Min</i>			IS 1060 (Part 5/Sec 6)
	a) Machine Direction	50	50	
	b) Cross Direction	30	30	
v)	Tear index, average, mN m <sup>2</sup> /g, <i>Min</i>	4.5	4.5	IS 1060 (Part 6/sec 1)
vi)	Burst index, kPa.m <sup>2</sup> /g, <i>Min</i>	2.2	2.2	IS 1060 ( Part 6/Sec2)
vii)	Gloss percent at 75°, <i>Min</i>			
	a) Top Side	25	15 (for matt finish) 55 (for gloss finish)	IS 1060 (Part 5/Sec 12)
	b) Bottom Side	25	—	

Tear Index = Tear factor x 0.098; Burst Index = Burst factor x 0.098; Tensile Index = Breaking length, m x 0.0098

#### 5.4 Additional Requirements for ECO Mark

##### 5.4.1 General Requirements

The product shall conform to the requirements for quality and performance prescribed under **5.1** to **5.3**.

**5.4.2** The manufacturer 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 Rules made thereunder, while applying for ECO-Mark.

#### **5.4.3 Product Specific Requirements**

The material shall be of the following varieties depending on the raw material used in the manufacture:

- a) The paper and paper boards manufactured out of pulp containing not less than 60 percent by weight of pulp made from materials other than bamboo, hardwoods, softwoods and reed; and
- b) Recycled paper and paper board must be made from 100 percent waste paper.'

### **6 PACKAGING AND MARKING**

#### **6.1 Packing**

**6.1.1** The paper shall be packed securely and suitably as agreed to between the purchaser and the supplier to ensure that the paper is not damaged due to handling and transportation.

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

#### **6.2 Marking**

**6.2.1** Each package or roll shall be marked with the following particulars:

- a) Description including grade of the product;
- b) Substance in g/m<sup>2</sup> of the paper;
- c) Size of the paper. In the case of reels, width and length of the paper;
- d) Lot number,
- e) Month and year of manufacture; and
- f) Indication of source of manufacture.

#### **6.2.2 BIS Certification Marking**

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.

**6.2.3** 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.'

### **7 SAMPLING AND CRITERIA FOR CONFORMITY**

#### **7.1 Sampling**

The paper shall be sampled in accordance with IS 1060 (Part 1).

#### **7.2 Number of Tests**

From each of the ream, selected from the lot (*see 7.1*), one sheet shall be taken out at random. These sheets shall constitute the sample. The sheets selected shall first be tested for general requirements given in **5.1** and **5.2**. One test piece shall be cut from each sheet selected for each of the characteristics mentioned in **5.3** and Table 1, and tested. A sheet not meeting the requirements shall be considered as defective.

### **7.3 Criteria for Conformity**

A lot shall be declared as conforming to all the requirements of this standard if the number of defective sheets found does not exceed the acceptance number. The acceptance number shall depend upon the size of the sample and shall be zero if the size is less than 13. The acceptance number shall be one if it is greater than or equal to 13.

## ANNEX A

(Clause 2)

## LIST OF REFERRED STANDARDS

<i>IS No.</i>	<i>Title</i>
IS 1060	Methods of sampling and test for paper and allied products:
(Part 1) : 2022	Test methods for general purpose ( <i>second revision</i> )
(Part 5)	Methods of test for paper and board,
(Sec 3) : 2014/ ISO 534 : 2011	Determination of thickness density and specific volume
(Sec 5) : 2021/ ISO 536 : 2019	Determination of grammage ( <i>first revision</i> )
(Sec 6) : 2014/ ISO 1942-2 : 2008	Determination of tensile properties — Constant rate of elongation method (20 mm/min)
(Sec 12) : 2021/ ISO 8254-1 : 2009	Measurement of specular gloss 75 degree gloss with a converging beam TAPPI method
(Sec 14) : 2014/ ISO 5636-5 : 2013	Determination of air permeance and air resistance (Medium range) — Gurley method
(Sec 20) : 2018/ ISO 8791-2 : 2013	Determination of roughness/smoothness (air leak methods) — Bendtsen method
(Part 6)	Methods of test for paper,
(Sec 1) : 2014/ ISO 1974 : 2012	Methods of test for paper, Section 1 Determination of tearing resistance — Elmendorf method
(Sec 2) : 2024/ ISO 2758 : 2014	Determination of bursting strength of paper ( <i>first revision</i> )
IS 4661 (Part 4) : 2022/ ISO 4046-4 : 2016	Paper board pulps and related terms — Vocabulary: Part 4 Paper and board grades and converted products ( <i>third revision</i> )