

भारतीय मानक मसौदा**टीश्यू पेपर और टीश्यू उत्पाद — परीक्षण पद्धतियाँ**

भाग 5 ऑप्टिकल गुणों का निर्धारण — डी 65/10° (बाहरी दिन के उजाले) के साथ चमक और रंग का मापन

Draft Indian Standard**Tissue paper and tissue products — Methods of test**

Part 5 Determination of optical properties — Measurement of brightness and colour with D65/10° (outdoor daylight)

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ICS 85.080.20

Paper and its Products Sectional Committee,
CHD 15

Last date of comments: 25th December 2024

NATIONAL FOREWORD

(formal clauses to be added later)

Brightness and colour measurement can be performed under various illumination and observation conditions. Optical measurement is affected by the geometry of the instruments used and by the texture of the material. The optical properties are related to the visual appearance of the material. Therefore, although optical properties are intrinsic properties of tissue paper, they are not functional properties.

This document deals with D65/10° conditions, which refer to an outdoor daylight. A separate standard is being developed for C/2° conditions (indoor daylight).

The relevant test methods for tissue paper and tissue products are being published under the general title 'Tissue paper and tissue products — Methods of test'. The standard is being published in several parts.

Considering the benefits of aligning standard with that of international standards, the Committee responsible for development of this standard decided to prepare this standard by identical adoption of ISO

12625-7 'Tissue paper and tissue products: Part 7 Determination of optical properties — Measurement of brightness and colour with D65/10° (outdoor daylight)' under dual numbering and publish as part of the general title 'Tissue paper and tissue products – Methods of test'.

This Part specifies testing procedures for the instrumental determination of brightness and colour of tissue paper and tissue products viewed under outdoor daylight conditions. It also provides specific instructions for the preparation of test pieces (single-ply, multi-ply products) and for the optical measurements of products. The other parts in this series are:

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| (Part 1) | Determination of thickness, bulking thickness and apparent bulk density and bulk (<i>under development</i>) |
| (Part 2) | Determination of tensile strength, stretch at maximum force and tensile energy absorption (<i>under development</i>) |
| (Part 3) | Determination of wet tensile strength (<i>under development</i>) |
| (Part 4) | Determination of grammage (<i>under development</i>) |
| (Part 6) | Water-absorption time and water-absorption capacity, basket-immersion test method (<i>under development</i>) |
| (Part 7) | Determination of disintegration in water (<i>under development</i>) |

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'; and
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 186 Paper and board — Sampling to determine average quality	IS 1060 (Part 5/Sec 1) : 2014/ISO 186 : 2002 Methods of sampling and test for paper and allied products: Part 5 Methods of test for paper and board, Section 1 Sampling to determine average quality.	Identical
ISO 187 Paper, board and pulps — Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples	IS 1060 (Part 4/Sec 1) : 20XX/ ISO 187 : 2022 Methods of sampling and test for paper and allied products: Part 4 Methods of test for paper, board and pulp, Section 1 Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of	Identical

	samples. (<i>first revision</i>) (<i>under development</i>)	
ISO 2469 Paper, board and pulps — Measurement of diffuse radiance factor (diffuse reflectance factor)	IS 1060 (Part 4/Sec 4) : 2024/ ISO 2469 : 2024 Methods of sampling and test for paper and allied products: Part 4 Methods of test for paper, board and pulp, Sec 4 Measurement of diffuse radiance factor (diffuse reflectance factor) (<i>first revision</i>)	Identical
ISO 11475 : 2017 Paper and board — Determination of CIE whiteness, D65/10 degrees (outdoor daylight)	IS 1060 (Part 5/Sec 18) : 2024/ISO 11475 : 2017 Methods of sampling and test for paper and allied products: Part 5 Methods of test for paper and board, Sec 4 Determination of CIE whiteness, D65/10° (outdoor daylight) (<i>first revision</i>)	Identical

The Committee has reviewed the provisions of the following International Standard referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO 4094	Paper, board and pulps — General requirements for the competence of laboratories authorized for the issue of optical reference transfer standards of level 3
ISO/CIE 11664-4	Colorimetry — Part 4: CIE 1976 L*a*b* colour space

In this adopted standard, reference appears to certain International Standards where the standard atmospheric conditions to be observed are stipulated which are not applicable to tropical/subtropical countries. The applicable standard atmospheric conditions for Indian conditions are (27 ± 2) °C and (65 ± 5) percent relative humidity and shall be observed while using this standard.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'.

'FOR COMPLETE TEXT OF THE DOCUMENT, KINDLY REFER ISO 12625-7 : 2021

Note: The technical content of the document has not been enclosed as these are identical with the corresponding ISO Standard. For obtaining the copy of the complete ISO Standard, please contact:

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