

भारतीय मानक मसौदा  
टीश्यू पेपर और टीश्यू उत्पाद— परीक्षण पद्धतियाँ  
भाग 7 जल में विघटन का निर्धारण

*Draft Indian Standard*

**Tissue paper and tissue products — Methods of test**  
Part 7 Determination of disintegration in water

(Not to be reproduced without the permission of BIS or used as an Indian Standard)

ICS 01.040.85; 85.080.20

Paper and its Products Sectional Committee,  
CHD 15

Last date of comments: 25<sup>th</sup> December 2024

NATIONAL FOREWORD

*(formal clauses to be added later)*

Disintegration is an important property of tissue paper and tissue products specially of Toilet paper which need to break down quickly in water to prevent plumbing issues.

The fact that not only end-use tissue products but also the base tissue paper from which these products are made, is the subject of trade between companies and countries, means that there is a genuine need for a consistent measure of disintegration in water that can be applied to tissue products at any stage of their manufacture.

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 12625-17 'Tissue paper and tissue products: Part 17 Determination of disintegration in water' under dual numbering and publish as part of the general title 'Tissue paper and tissue products — Methods of test'.

This Part specifies a method to assess the disintegration of tissue paper and tissue products when subjected to mechanical agitation in water for 30 s, 2 min and 10 min. The other parts in this series are:

|          |   |
|----------|---|
| (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 5) | Determination of optical properties — Measurement of brightness and colour with D65/10° (outdoor daylight) ( <i>under development</i> ) |
| (Part 6) | Water-absorption time and water-absorption capacity, basket-immersion test method ( <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 samples. ( <i>first revision</i> ) ( <i>under development</i> ) | Identical                    |

|  |   |           |
|--|---|-----------|
| ISO 638-1 Paper, board, pulps and cellulosic nanomaterials — Determination of dry matter content by oven-drying method: Part 1 Materials in solid form | IS 1060 (Part 8/Sec 4) : 20XX/ ISO 638-1 : 2022 Methods of sampling and test for paper and allied products: Part 8 Methods of test for paper, board, pulps and cellulose nanomaterials, Section 4 Determination of dry matter content by oven-drying method — Materials in solid form. ( <i>Under development</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 3310-1                    | Test sieves — Technical requirements and testing: Part 1 Test sieves of metal wire cloth       |
| ISO 3310-2                    | Test sieves — Technical requirements and testing: Part 2 Test sieves of perforated metal plate |
| ISO 14487                     | Pulps — Standard water for physical testing  |

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  $(27 \pm 2) ^\circ\text{C}$  and  $(65 \pm 5)$  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 12625-17 : 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:

Scientist 'F'/Senior Director and Head (Chemical)  
Chemical Department  
Bureau of Indian Standards  
Manak Bhavan, 9, Bahadur Shah Zafar Marg  
New Delhi-110002  
Telephone: 011-23236428

Email: [chd@bis.gov.in](mailto:chd@bis.gov.in) or [chd15@bis.org.in](mailto:chd15@bis.org.in)