
Tissue papir in proizvodi iz tissue papirja - 15. del: Ugotavljanje optičnih lastnosti - Merjenje beline in barve s svetilom C/2° (osvetlitev v prostoru) (ISO 12625-15:2015)

Tissue paper and tissue products - Part 15: Determination of optical properties - Measurement of brightness and colour with C/2° (indoor daylight) illuminant (ISO 12625-15:2015)

Tissue-Papier und Tissue-Produkte - Teil 15: Bestimmung von optischen Eigenschaften - Messung von Brightness und Farbe unter Lichtart C/2° (Tageslichtbedingungen in Innenräumen) (ISO 12625-15:2015)

Papier tissue et produits tissues - Partie 15: Détermination des propriétés optiques - Mesurage du degré de blancheur et de la couleur avec l'illuminant C/2° lumière du jour à l'intérieur) (ISO 12625-15:2015)

Ta slovenski standard je istoveten z: EN ISO 12625-15:2015

ICS:

85.080.20 Tissue papir Tissue paper

SIST EN ISO 12625-15:2015 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 12625-15:2015](https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015)

<https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015>

EUROPEAN STANDARD

EN ISO 12625-15

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2015

ICS 85.060

English Version

Tissue paper and tissue products - Part 15: Determination of optical properties - Measurement of brightness and colour with C/2° (indoor daylight) illuminant (ISO 12625-15:2015)

Papier tissue et produits tissue - Partie 15: Détermination des propriétés optiques - Mesurage du degré de blancheur et de la couleur avec l'illuminant C/2° (lumière du jour à l'intérieur) (ISO 12625-15:2015)

Tissue-Papier und Tissue-Produkte - Teil 15: Bestimmung von optischen Eigenschaften - Messung von Brightness und Farbe unter Lichtart C/2° (Tageslichtbedingungen in Innenräumen) (ISO 12625-15:2015)

This European Standard was approved by CEN on 3 January 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....3

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 12625-15:2015](https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015)
<https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015>

Foreword

This document (EN ISO 12625-15:2015) has been prepared by Technical Committee ISO/TC 6 “Paper, board and pulps” in collaboration with Technical Committee CEN/TC 172 “Pulp, paper and board” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2015, and conflicting national standards shall be withdrawn at the latest by August 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

iTeh **Endorsement notice** STANDARD PREVIEW

The text of ISO 12625-15:2015 (standards.iteh.ai) has been approved by CEN as EN ISO 12625-15:2015 without any modification.

[SIST EN ISO 12625-15:2015
https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015](https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 12625-15:2015](https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015)

<https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015>

INTERNATIONAL
STANDARD

ISO
12625-15

First edition
2015-02-15

Tissue paper and tissue products —
Part 15:
Determination of optical properties —
Measurement of brightness and colour
with C/2° (indoor daylight) illuminant

iTeh STANDARD PREVIEW

Papier tissu et produits tissu —
Partie 15: Détermination des propriétés optiques — Mesurage du
degré de blancheur et de la couleur avec l'illuminant C/2° (lumière du
jour à l'intérieur)

[SIST EN ISO 12625-15:2015](https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015)

<https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015>



Reference number
ISO 12625-15:2015(E)

© ISO 2015

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 12625-15:2015
<https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	3
5 Apparatus	3
5.1 Reflectometer or spectrophotometer.....	3
5.2 Reference standard for calibration of the instrument.....	3
5.3 Working standards.....	3
6 Calibration	4
7 Sampling	4
8 Conditioning	4
9 Preparation of test pieces	5
10 Procedure	5
10.1 General.....	5
10.2 Measurement of C/2° brightness.....	5
10.3 Measurement of (C/2°) colour.....	5
11 Calculation	6
11.1 C/2° brightness.....	6
11.2 C/2° Colour.....	6
11.2.1 Single values.....	6
11.2.2 Mean value.....	6
11.2.3 Dispersion of the results.....	7
12 Test report	7
Annex A (informative) Precision	8
Bibliography	11

ISO 12625-15:2015(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

ISO 12625-15 was prepared by European Committee for Standardization (CEN) Technical Committee CEN/TC 172 *Pulp, paper and board*, in collaboration with Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 2, *Test methods for quality specifications for paper and board*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 12625 consists of the following parts, under the general title *Tissue paper and tissue products*:

- *Part 1: General guidance on terms*
- *Part 3: Determination of thickness, bulking thickness, apparent bulk density and bulk*
- *Part 4: Determination of tensile strength, stretch at break and tensile energy absorption*
- *Part 5: Determination of wet tensile strength*
- *Part 6: Determination of grammage*
- *Part 7: Determination of optical properties — Measurement of brightness and colour with D65/10° (outdoor daylight)*
- *Part 8: Water-absorption time and water-absorption capacity, basket-immersion test method*
- *Part 9: Determination of ball burst strength*
- *Part 11: Determination of wet ball burst strength*
- *Part 12: Determination of tensile strength of perforated lines — Calculation of perforation efficiency*
- *Part 15: Determination of optical properties — Measurement of brightness and colour with C/2° (indoor daylight)*
- *Part 16: Determination of optical properties — Opacity (paper backing) — Diffuse reflectance method*

Introduction

Brightness and colour measurement may be performed under various illumination and observation conditions. This part of ISO 12625 deals with C/2° conditions, which refer to an indoor daylight.

D65/10° conditions (outdoor daylight) are considered in ISO 12625-7. Although both standards deal with brightness and colour, results obtained are usually different and do not correlate.

Optical measurements are affected by the geometry of the instruments used and by the texture of the material. The design of the instrument to be used according to this part of ISO 12625, and the routine to be adopted for its calibration are specified in ISO 2469 and ISO 2470-1.

The optical properties are related to the visual appearance of the material in a specified illumination condition. Although optical properties are intrinsic properties of tissue paper, they are not functional properties.

Brightness is not to be confused with the optical property called CIE-whiteness, which is based on reflectance data obtained over the full visible spectral range (VIS). In contrast, brightness is limited to the blue region of VIS (visible spectrum).

As preferences for the properties to be specified can vary by country/market, three different test methods for the determination of optical properties were developed:

- *Part 7: Determination of optical properties — Measurement of brightness and colour with D65/10° (outdoor daylight);*
- *Part 15: Determination of optical properties — Measurement of brightness and colour with C/2° (indoor daylight);*
- *Part 16: Determination of optical properties — Measurement of opacity (paper backing) — Diffuse reflectance method.*

STANDARD PREVIEW
(standards.iteh.ai)
[SIST EN ISO 12625-15:2015](https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015)
<https://standards.iteh.ai/catalog/standards/sist/b365e23d-be22-4775-956d-1c4cc9580757/sist-en-iso-12625-15-2015>