This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN ISO 12625-3:2014

Tissue paper and tissue products - Part 3: Determination of thickness, bulking thickness and apparent bulk density and bulk (ISO 12625-3:2014)

© CEN 2014 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN ISO 12625-3:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN ISO 12625-3:2014	2014-04-02

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2014-04-12	85.060
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 12625-3

April 2014

ICS 85.060

Supersedes EN ISO 12625-3:2005

English Version

Tissue paper and tissue products - Part 3: Determination of thickness, bulking thickness and apparent bulk density and bulk (ISO 12625-3:2014)

Papier tissue et produits tissue - Partie 3: Détermination de l'épaisseur, de l'épaisseur moyenne d'une feuille en liasse et de la masse volumique moyenne et de la main (ISO 12625-3:2014)

Tissue-Papier und Tissue-Produkte - Teil 3: Bestimmung der Dicke, der Blattdicke im Stapel, der scheinbaren Stapeldichte und des spezifischen Volumens (ISO 12625-3:2014)

This European Standard was approved by CEN on 15 February 2014.

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

© 2014 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 12625-3:2014 E

This is a free page sample. Access the full version online.

Contents

Page

Foreword.....3

This is a free page sample. Access the full version online.

Foreword

This document (EN ISO 12625-3:2014) has been prepared by Technical Committee ISO/TC 6 “Paper, board and pulps" in collaboration Technical Committee EN ISO 12625-3:2014 by 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 October 2014, and conflicting national standards shall be withdrawn at the latest by October 2014.

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.

This document supersedes EN ISO 12625-3:2005.

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.

Endorsement notice

The text of ISO 12625-3:2014 has been approved by CEN as EN ISO 12625-3:2014 without any modification.

This is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online.

INTERNATIONAL STANDARD

ISO 12625-3

Second edition
2014-03-15

Tissue paper and tissue products —

Part 3: Determination of thickness, bulking thickness and apparent bulk density and bulk

Papier tissue et produits tissue —

Partie 3: Détermination de l'épaisseur, de l'épaisseur moyenne d'une feuille en liasse et de la masse volumique moyenne et de la main

Reference number
ISO 12625-3:2014(E)

© ISO 2014

This is a free page sample. Access the full version online.

COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

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

This is a free page sample. Access the full version online.

Contents

Page

Foreword ..... **iv**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Principle **2**

5 Apparatus **2**
- 5.1 Precision dead-weight micrometer 2
- 5.2 Gauge blocks 3
- 5.3 Balance and attachments 3

6 Conditioning **3**

7 Preparation of test pieces **3**
- 7.1 General 3
- 7.2 Single-ply thickness 3
- 7.3 Single-ply sheet thickness 3
- 7.4 Bulking thickness 3

8 Procedure **4**

9 Calculation **4**
- 9.1 Single-ply thickness 4
- 9.2 Single sheet thickness 4
- 9.3 Bulking thickness 4
- 9.4 Apparent bulk density 4
- 9.5 Bulk (apparent specific bulk volume) 5

10 Test report **5**

Annex A (informative) **Precision** **6**

Annex B (normative) **Measurement conditions** **8**

Annex C (informative) **Foot pressure** **10**

Bibliography **11**

© ISO 2014 – All rights reserved

This is a free page sample. Access the full version online.

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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 12625-3 was prepared by the 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 and quality specifications for paper and board,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second. edition cancels and replaces the first edition (ISO 12625-3:2005), which has been technically revised.

With regard to ISO 12625-3:2005, the following minor changes have been made:

a) title changed; "bulk" added;

b) the accuracy data in Annex A were adjusted to the existing equipment capabilities and calibration procedures;,

c) preparation of test pieces more precisely described, 7.1 and 7.4 reformulated;

d) editorial updating.

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;*

 © ISO 2014 – All rights reserved

This is a free page sample. Access the full version online.

— *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) illuminant;*

— *Part 16 Determination of optical properties — Opacity (paper backing) — Diffuse reflectance method*

© ISO 2014 – All rights reserved

This is a free page sample. Access the full version online.

Introduction

Thickness is an important property of tissue paper and tissue products.

In the tissue industry, thickness-related parameters, such as the roll diameter of rolled products (kitchen towel) or the stack height of folded products (paper towels) are often measured. However, 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 thickness that can be applied to tissue products at any stage of their manufacture.

The thickness of tissue paper and tissue products is known to be dependent on the pressure applied to the material at the time of measurement. Several different loading pressures, pressure-foot diameters and loading speeds have been used within the tissue industry. This part of ISO 12625 has been prepared by harmonizing those standards applicable to tissue and tissue products currently in use. It specifies a single loading pressure, foot diameter and loading speed to be used for all thickness measurements of tissue and tissue products.

It is expressly stated that the detection of impurities and contraries in tissue paper and tissue products should be applied according to ISO 15755.

For the determination of moisture content in tissue paper and tissue products, ISO 287 or ISO 638 should be applied.

© ISO 2014 – All rights reserved

This is a free page sample. Access the full version online.

Tissue paper and tissue products —

Part 3: Determination of thickness, bulking thickness and apparent bulk density and bulk

1 Scope

This part of ISO 12625 specifies a test method for the determination of thickness and bulking thickness and the calculation of apparent bulk density and bulk of tissue papers and tissue products under a pressure of 2,0 kPa.

NOTE This part of ISO 12625 has been developed to provide a consistent test method for the determination of thickness and density of tissue paper and tissue products. Corresponding test methods for paper and board in general are covered in ISO 534.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 186, *Paper and board — Sampling to determine average quality*

ISO 187, *Paper, board and pulps — Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples*

ISO 12625-1, *Tissue paper and tissue products — Part 1: General guidance on terms*

ISO 12625-6, *Tissue paper and tissue products — Part 6: Determination of grammage*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12625-1 and the following apply.

3.1
single-ply thickness
distance between the two principal surfaces of a single ply of tissue paper measured under the applied static load specified in this part of ISO 12625

Note 1 to entry: A ‘ply’ of tissue is an unlaminated tissue, like that made directly from a tissue machine.

3.2
single sheet thickness
distance between the two principal surfaces of a single sheet of tissue product measured under the applied static load specified in this part of ISO 12625

Note 1 to entry: A ‘sheet’ of tissue is a laminated or unlaminated tissue like that present in the finished tissue product.

© ISO 2014 – All rights reserved

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation