



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 12625-9:2015

# Tissue paper and tissue products - Part 9: Determination of ball burst strength (ISO 12625-9:2015)

**I.S. EN ISO 12625-9:2015**

*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:*

EN ISO 12625-9:2015

*Published:*

2015-02-18

*This document was published  
under the authority of the NSAI  
and comes into effect on:*

2015-03-07

ICS number:

85.060

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

**EN ISO 12625-9**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2015

ICS 85.060

Supersedes EN ISO 12625-9:2005

English Version

## Tissue paper and tissue products - Part 9: Determination of ball burst strength (ISO 12625-9:2015)

Papier tissue et produits tissue - Partie 9: Détermination de la résistance à l'éclatement, méthode à la balle (ISO 12625-9:2015)

Tissue-Papier und Tissue-Produkte - Teil 9: Bestimmung der Berstfestigkeit mit einem Durchstoßkörper (ISO 12625-9:2015)

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**

**EN ISO 12625-9:2015 (E)**

**Contents**

Page

<b>Foreword.....</b>	<b>3</b>
----------------------	----------

## **Foreword**

This document (EN ISO 12625-9:2015) 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.

This document supersedes EN ISO 12625-9:2005.

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 12625-9:2015 has been approved by CEN as EN ISO 12625-9:2015 without any modification.

This page is intentionally left blank

# INTERNATIONAL STANDARD

**ISO  
12625-9**

Second edition  
2015-02-15

---

---

## **Tissue paper and tissue products — Part 9: Determination of ball burst strength**

*Papier tissue et produits tissue —*

*Partie 9: Détermination de la résistance à l'éclatement, méthode à la  
balle*



Reference number  
ISO 12625-9:2015(E)

© ISO 2015

**ISO 12625-9:2015(E)**



**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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland



# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Principle</b> .....	<b>2</b>
<b>5 Apparatus</b> .....	<b>2</b>
5.1 General.....	2
5.2 Clamping system.....	2
5.3 Penetration system.....	3
5.4 Force-measuring system.....	3
5.5 Drive mechanism.....	3
<b>6 Sampling</b> .....	<b>4</b>
<b>7 Conditioning</b> .....	<b>4</b>
<b>8 Preparation of test pieces</b> .....	<b>4</b>
8.1 General.....	4
8.2 Preparation of test pieces.....	4
<b>9 Procedure</b> .....	<b>4</b>
<b>10 Calculation</b> .....	<b>5</b>
<b>11 Test report</b> .....	<b>5</b>
<b>Annex A (informative) Precision</b> .....	<b>6</b>
<b>Annex B (informative) Adaptor</b> .....	<b>9</b>
<b>Bibliography</b> .....	<b>10</b>

## ISO 12625-9:2015(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](http://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](http://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](#)

The committee responsible for this document is 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) in collaboration with by the European Committee for Standardization (CEN) Technical Committee CEN/TC 172, *Pulp, paper and board*.

This second edition cancels and replaces the first edition, ISO 12625-9:2005, which has been technically revised.

The following changes have been made:

- [Clause 4](#) was reformulated;
- internal diameter of the two concentric rings was reduced to 50 mm;
- description of the procedure in [Clause 9](#) was simplified;
- precision data in [Annex A](#) was added;
- editorial updating.

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

- *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 maximum force 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*

## **ISO 12625-9:2015(E)**

### **Introduction**

This part of ISO 12625 is applicable to tissue papers and tissue products. In principle, application to other paper types is possible, but not covered by this part of ISO 12625.

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

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

# Tissue paper and tissue products —

## Part 9:

## Determination of ball burst strength

### 1 Scope

This part of ISO 12625 specifies a test method for the determination of the resistance to mechanical penetration (ball burst strength procedure) of tissue paper and tissue products.

Currently, two types of clamping devices are available on the market with two different diameters, one is with 50 mm and one is with 89 mm (see [Annex B](#)). This part of ISO 12625 applies for a 50 mm clamping device to be able to measure all sample sizes of tissue paper and tissue products and to be consistent with ISO 12625-11.

### 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 7500-1, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

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

##### **grammage**

##### ***g***

mass of a unit area of tissue paper or tissue product as determined by the procedure specified in ISO 12625-6

Note 1 to entry: The grammage is expressed in gram per square metre (g/m<sup>2</sup>).

#### 3.2

##### **bursting force**

##### ***F***

maximum force that a test piece of tissue paper or tissue product can withstand under the test conditions, applied at right angle to its surface

Note 1 to entry: The bursting force is expressed in newton (N).

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
-