

**Tissue paper and tissue products - Part 4:
Determination of tensile strength, stretch at
break and tensile energy absorption**

Tissue paper and tissue products - Part 4:
Determination of tensile strength, stretch at break
and tensile energy absorption

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 12625-4:2005 sisaldab Euroopa standardi EN ISO 12625-4:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 22.06.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 12625-4:2005 consists of the English text of the European standard EN ISO 12625-4:2005.</p> <p>This document is endorsed on 22.06.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This part of ISO 12625 specifies a test method for the determination of the tensile strength, stretch at break and tensile energy absorption of tissue paper and tissue products. It uses a tensile-testing apparatus operating with a constant rate of elongation.</p>	<p>Scope:</p> <p>This part of ISO 12625 specifies a test method for the determination of the tensile strength, stretch at break and tensile energy absorption of tissue paper and tissue products. It uses a tensile-testing apparatus operating with a constant rate of elongation.</p>
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ICS 85.080

Võtmesõnad:

English version

**Tissue paper and tissue products - Part 4: Determination of
tensile strength, stretch at break and tensile energy absorption
(ISO 12625-4:2005)**

Papier tissu et produits en tissu - Partie 4: Détermination
de la résistance à la rupture par traction, de l'allongement à
la rupture par traction et de l'absorption d'énergie à la
rupture par traction (ISO 12625-4:2005)

Tissue-Papier und Tissue-Produkte - Teil 4: Bestimmung
der breitenbezogenen Bruchkraft, der Bruchdehnung und
des Arbeitsaufnahmevermögens (ISO 12625-4:2005)

This European Standard was approved by CEN on 15 March 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

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Foreword

This document (EN ISO 12625-4:2005) has been prepared by Technical Committee CEN/TC 172 "Pulp, paper and board", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 6 "Paper, board and pulps".

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 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

This document supersedes EN 12625-4:1999.

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

Tissue paper and tissue products —

Part 4:

**Determination of tensile strength, stretch
at break and tensile energy absorption**

Papier tissu et produits en tissu —

*Partie 4: Détermination de la résistance à la rupture par traction, de
l'allongement à la rupture par traction et de l'absorption d'énergie à la
rupture par traction*



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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Principle	2
5 Apparatus	2
6 Conditioning	3
7 Preparation of test pieces	3
8 Procedure	4
9 Calculation	4
10 Test report	6
11 Precision	7
Bibliography	9

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 12625-4 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 first edition cancels and replaces EN 12625-4:1999, which has been technically revised.

With regard to EN 12625-4:1999, the following changes have been made:

- a) a more precise definition of the measurement was added;
- b) “preparation of test pieces” was explained more exactly;
- c) 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 and apparent bulk density*
- *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*
- *Part 8: Water absorption time and water absorption capacity, basket immersion test method*
- *Part 9: Determination of ball burst strength*

Tissue paper and tissue products —

Part 4:

Determination of tensile strength, stretch at break and tensile energy absorption

1 Scope

This part of ISO 12625 specifies a test method for the determination of the tensile strength, stretch at break and tensile energy absorption of tissue paper and tissue products. It uses a tensile-testing apparatus operating with a constant rate of elongation.

It also specifies the method of calculating the tensile index and the tensile energy absorption index.

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 should be applied.

2 Normative references

The following referenced documents are indispensable for the application of this document. 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 536, *Paper and board — Determination of grammage*

ISO 1924-2:1994, *Paper and board — Determination of tensile properties — Part 2: Constant rate of elongation method*

ISO 7500-1, *Metallic materials — Verification of 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*