

**Paper and board - Determination of thickness, density  
and specific volume (ISO 534:2011)**

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## EESTI STANDARDI EESSÕNA

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.11.2011.	Date of Availability of the European standard is 15.11.2011.
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English Version

## Paper and board - Determination of thickness, density and specific volume (ISO 534:2011)

Papier et carton - Détermination de l'épaisseur, de la masse volumique et du volume spécifique (ISO 534:2011)

Papier und Pappe - Bestimmung der Dicke, der Dichte und des spezifischen Volumens (ISO 534:2011)

This European Standard was approved by CEN on 2 December 2011.

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## Foreword

This document (EN ISO 534:2011) 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of an identical text or by endorsement, at the latest by May 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

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 534:2005.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

### Endorsement notice

The text of ISO 534:2011 has been approved by CEN as a EN ISO 534:2011 without any modification.

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# Paper and board — Determination of thickness, density and specific volume

## 1 Scope

This International Standard specifies two methods for measuring the thickness of paper and board:

- a) the measurement of a single sheet of paper or board as a single sheet thickness;
- b) the measurement of a pack of sheets of paper as a bulking thickness.

This International Standard also specifies calculation methods

- for the apparent sheet density and for the apparent bulk density, and
- for the apparent specific sheet volume and for the apparent specific bulk volume

from the thickness determinations.

This International Standard is not applicable to corrugated fibreboard. In addition, the measurement of bulking thickness, method b) above, is not suitable for board<sup>1)</sup>.

NOTE The two methods generally lead to different results. These methods are not applicable to tissue paper and tissue products. For tissue paper and tissue products, ISO 12625-3 should be used.

## 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*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **single sheet thickness**

distance between one surface of a paper or board and the other, measured under an applied static load, using this test method

### 3.2

#### **bulking thickness**

thickness of a single sheet of paper, calculated from the thickness of several superimposed sheets in a pack, and measured under an applied static load, using this test method

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1) For the definition of "board", see ISO 4046-3:2002, definition 3.16.