AS/NZS 1301.426s:2015
ISO 534:2011

AS/NZS 1301.426s:2015

Australian/New Zealand Standard™

Methods of test for pulp and paper

Method 426s: Paper and board—Determination of thickness, density and specific volume

STANDARDS Australia

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee PK-019, Methods of Test for Pulp and Paper. It was approved on behalf of the Council of Standards Australia on 28 May 2015 and on behalf of the Council of Standards New Zealand on 27 March 2015.
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The following are represented on Committee PK-019:

Appita
Australian Forest Products Association
Australian Institute of Packaging
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee PK-019, Methods of Test for Pulp and Paper, to supersede AS/NZS 1301.426s:1994, *Determination of thickness and apparent bulk density or apparent sheet density*.

The objective of this Standard is to specify methods for measuring the thickness of paper and board and of calculating the apparent bulk density or the apparent sheet density.

This Standard is identical with, and has been reproduced from ISO 534:2011, *Paper and board—Determination of thickness, density and specific volume.*

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text 'this International Standard' should read 'this Australian/New Zealand Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
ISO		AS/NZS	
186	Paper and board—Sampling to determine average quality	1301	Methods of test for pulp and paper
		1301.417s	Method 417s: Sampling to determine average quality
187	Paper, board and pulps—Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples	1301.414s*	Method 414s: Conditioning of paper for testing
536	Paper and board—Determination of grammage	1301.405s	Method 405s: Grammage of non-creped paper and board

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative' annex is only for information and guidance.

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* Although AS/NZS 1301.414s is not an identical adoption of ISO 187, it is the preferred test method for Australia and New Zealand as ISO 187 permits a preconditioning humidity range that is considered too wide to ensure the attainment of the lower isotherm moisture level prior to testing. ISO 187 also specifies the standard atmosphere which is not specified in AS/NZS 1301.414s but in AS/NZS 1301.415s. ISO 187 permits the use of a standard tropical atmosphere but this is not an option in AS/NZS 1301.415. See AS/NZS 1301.414s for further information.

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AUSTRALIAN/NEW ZEALAND STANDARD

Methods of test for pulp and paper

Method 426s:
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[1)].

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

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