BS ISO 5636-5:2013

BSI Standards Publication

Paper and board — Determination of air permeance (medium range)

Part 5: Gurley method

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National foreword

This British Standard is the UK implementation of ISO 5636-5:2013. It supersedes BS ISO 5636-5:2003 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PAI/11, Methods of test for paper, board and pulps.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Part 5: Gurley method

Papier et carton — Détermination de la perméabilité à l'air (plage de valeurs moyennes) —

Partie 5: Méthode Gurley

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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

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*.

This third edition cancels and replaces the second edition (ISO 5636-5:2003), which has been technically revised. In this third edition mainly editorial changes have been made and also precision data has been added as informative Annex C.

ISO 5636 consists of the following parts, under the general title *Paper and board — Determination of air permeance (medium range)*:

— *Part 3: Bendtsen method*

— *Part 4: Sheffield method*

— *Part 5: Gurley method*

— *Part 6: Oken method*

NOTE 1 *Part 1: General method* will be withdrawn after the third editions of Parts 3, 4 and 5 have been published, as it was considered redundant.

NOTE 2 *Part 2: Schopper method* was withdrawn in 2006 as it was considered obsolete.

NOTE 3 *Part 6: Oken method* is being prepared.

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INTERNATIONAL STANDARD ISO 5636-5:2013(E)

Paper and board — Determination of air permeance (medium range) —

Part 5: Gurley method

1 Scope

This part of ISO 5636 specifies the Gurley method for determining the air permeance of paper and board using an air resistance tester, the Gurley apparatus.

It is applicable to papers and boards which have air permeances between 0,1 µm/(Pa·s) and 100 µm/(Pa·s) when tested with the Gurley apparatus.

It is unsuitable for rough-surfaced materials, which cannot be securely clamped to avoid leakage.

This part of ISO 5636 may also be used to determine the air resistance of paper and board.

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 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

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 385, *Laboratory glassware — Burettes*

ISO 3104, *Petroleum products — Transparent and opaque liquids — Determination of kinematic viscosity and calculation of dynamic viscosity*

3 Terms and definitions

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

3.1
air permeance
mean air flow rate through unit area under unit pressure difference in unit time, under specified conditions

Note 1 to entry: Air permeance is expressed in micrometres per pascal second [1 ml/(m^2·Pa·s) = 1 µm/(Pa·s)].

Note 2 to entry: This property is called air permeance, and not air permeability, because it is reported as a sheet property and is not standardized with respect to thickness to give a material property per unit thickness.

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