



**SLOVENSKI STANDARD**  
**oSIST ISO 5636-5:2011**  
**01-marec-2011**

---

**Papir, karton in lepenka - Določanje prepustnosti zraka (srednje območje) - 5. del:  
Gurleyjeva metoda**

Paper and board -- Determination of air permeance and air resistance (medium range) --  
Part 5: Gurley method

Papier et carton -- Détermination de la perméabilité à l'air et de la résistance à l'air  
(valeur moyenne) -- Partie 5: Méthode Gurley

**Ta slovenski standard je istoveten z: ISO 5636-5:2003**

---

**ICS:**

85.060          Papir, karton in lepenka          Paper and board

**oSIST ISO 5636-5:2011**

**en**



# INTERNATIONAL STANDARD

**ISO**  
**5636-5**

Second edition  
2003-06-01

---

---

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

### **Part 5: Gurley method**

*Papier et carton — Détermination de la perméabilité à l'air et de la résistance à l'air (valeur moyenne) —*

*Partie 5: Méthode Gurley*



Reference number  
ISO 5636-5:2003(E)

© ISO 2003

**ISO 5636-5:2003(E)****PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2003

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing 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

Foreword.....	iv
Introduction .....	v
1 Scope.....	1
2 Normative references .....	1
3 Terms and definitions.....	1
4 Principle .....	2
5 Apparatus and materials .....	2
6 Sampling .....	3
7 Conditioning .....	3
8 Preparation of test pieces .....	3
9 Procedure .....	4
10 Expression of results.....	4
11 Precision .....	5
12 Test report .....	5
Annex A (informative) Variations in apparatus.....	6
Annex B (normative) Volume calibration .....	7

**ISO 5636-5:2003(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.

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 5636-5 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 2, *Test methods and quality specifications for paper and board*.

This second edition cancels and replaces the first edition (ISO 5636-5:1986), which has been technically revised.

In this edition, the factor to be used for the calculation of air permeance (10.1) has been changed to 135,3 (from calculation factor 127 in the first edition). The new factor for calculation of air permeance will cause an increase in the level of the result of approximately 7 %. To avoid confusion in trade due to the fact that some laboratories are not aware of this new edition and thus will still use the factor 127, it is important to report the calculation factor used.

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

- *Part 1: General method*
- *Part 2: Schopper method*
- *Part 3: Bendtsen method*
- *Part 4: Sheffield method*
- *Part 5: Gurley method*

## Introduction

This part of ISO 5636 describes a method for measuring the air permeance or, if required, the air resistance of paper and board using the measurement principle known as “Gurley”. The air pressure within the cylinder varies slightly according to the displacement of the cylinder, but it has been shown that the variation is about 1,2 % of the mean pressure for 100 ml of displacement and about 4 % for a cylinder with a displacement of 400 ml. Because these variations are within the 5 % limit specified in ISO 5636-1, the apparatus complies with the general requirements detailed in ISO 5636-1 and the air-permeance results may be expressed in micrometres per pascal second [ $\mu\text{m}/(\text{Pa}\cdot\text{s})$ ].

