# INTERNATIONAL STANDARD

ISO 9073-16

First edition 2007-12-01

### Textiles — Test methods for nonwovens —

Part 16:

Determination of resistance to penetration by water (hydrostatic pressure)

Textiles — Méthodes d'essai pour nontissés —

Partie 16: Détermination de la résistance à la pénétration de l'eau (pression hydrostatique)

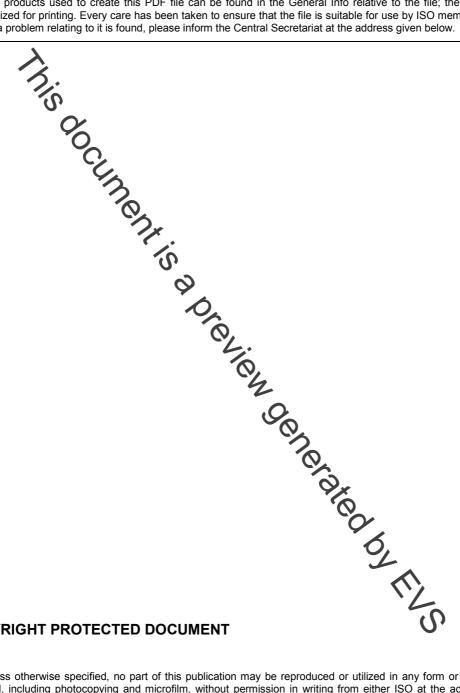


### PDF disclaimer

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



### **COPYRIGHT PROTECTED DOCUMENT**

### © ISO 2007

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 Web www.iso.org

Published in Switzerland

| Contents |  | Page |
|----------|--|------|
| Forev    | word   | iv   |
| 1        | Scope  | 1    |
| 2        | Normative references   | 1    |
| 3        | Terms and definitions  |      |
| 4        | Principle  | 2    |
| 5        | Apparatus  | 2    |
| 6        | Calibration  | 4    |
| 7        | Procedure  | 4    |
| 8        | Calculation  | 5    |
| 9        | Test report  | 5    |
| Anne     | ex A (informative) General information regarding reproducibility |      |

**Contents** 

### **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 Maison 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 or identifying any or all such patent rights.

ISO 9073-16 was prepared by Technical Committee ISO/TC 38, Textiles.

ISO 9073 consists of the following parts, under the general title *Textiles* — *Test methods for nonwovens*:

- Part 1: Determination of mass per unit area
- Part 2: Determination of thickness
- Part 3: Determination of tensile strength and elongation
- Part 4: Determination of tear resistance
- Part 5: Resistance to mechanical penetration (ball burst probability)
- Part 6: Absorption
- Part 7: Determination of bending length
- Part 8: Determination of liquid strike-through time (simulated urine)
- Part 9: Determination of drapability including drape coefficient
- Part 10: Lint and other particles generation in the dry state
- Part 11: Run-off
- Part 12: Demand absorbency
- Part 13: Repeated liquid strike-through time
- Part 14: Coverstock wetback
- Part 15: Determination of air permeability
- Part 16: Determination of resistance to penetration by water (hydrostatic pressure)
- Part 17: Determination of water penetration (spray impact)
- Part 18: Determination of breaking strength and elongation of nonwoven materials using the grab tensile test

### Textiles — Test methods for nonwovens —

### Part 16:

## Determination of resistance to penetration by water (hydrostatic pressure)

### 1 Scope

This part of ISO 9073 describes the hydrostatic pressure test that measures the resistance of nonwoven fabrics to the penetration of water under varied hydrostatic head pressures.

This part of ISO 9073 applies to any nonwoven fabrics which are intended for use as a barrier to the penetration of fluids.

### 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 139, Textiles — Standard atmospheres for conditioning and testing

ISO 3696, Water for analytical laboratory use — Specification and test methods

ISO 3951-5, Sampling procedures for inspection by variables — Part 5: Sequential sampling plans indexed by acceptance quality limit (AQL) for inspection by variables (known standard deviation)

ISO 10012:2003, Measurement management systems — Requirements for measurement processes and measuring equipment

### 3 Terms and definitions

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

### 3.1

### hectopascal

millibar

unit of atmospheric pressure equal to 100 N/m<sup>2</sup> or 0,000 981 m of a water column

### 3.2

### water resistance of nonwoven materials

fabric characteristics which are resistant to wetting and penetration by water

© ISO 2007 – All rights reserved