INTERNATIONAL STANDARD

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Textiles — Test methods for nonwovens —

Part 11: Run-off

Textiles — Méthodes d'essai pour nontissés —

Partie 11: Écoulement sur plan incliné

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 part of ISO 9073 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9073-11 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 6: Absorption*

— *Part 7: Determination of bending length*

— *Part 8: Determination of liquid strike-through time (simulated urine)*

— *Part 9: Determination of drape coefficient*

— *Part 10: Generation of lint and other particles in the dry state*

— *Part 11: Run-off*

— *Part 12: Demand absorbency*

Annex A of this part of ISO 9073 is for information only.

Textiles — Test methods for nonwovens —

Part 11: Run-off

1 Scope

This part of ISO 9073 describes test methods for measuring the quantity of test liquid (simulated urine) which runs down a nonwoven test piece when a specified mass of test liquid is poured on to the nonwoven test piece superimposed on a standard absorbent media and placed on an inclined plane.

This test method is designed to compare run-off of nonwovens. It is not intended to simulate in-use conditions of finished products.

Three alternative methods are described:

a) Test I — the basic method for testing hydrophilic nonwovens;

b) Test II — the repeated test, with the same test parameters as in a);

c) Test III — the modified method for testing hydrophobic nonwovens specifying another table inclination than in a).

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 9073. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 9073 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 139:1973, *Textiles — Standard atmospheres for conditioning and testing*

ISO 186:2002, *Paper and board — Sampling to determine average quality*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*

ISO 9073-6:2000, *Textiles — Test methods for nonwovens — Part 6: Absorption*

ISO 9073-8:1995, *Textiles — Test methods for nonwovens — Part 8: Determination of liquid strike-through time (simulated urine)*

3 Terms and definitions

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

3.1
run-off
quantity of excess liquid, in grams, that runs from the test piece

3.2
percent run-off
mass of the run-off liquid, expressed as a percentage of the original mass of liquid delivered

4 Test I – Basic method for testing hydrophilic nonwovens

4.1 Principle

A specified quantity of simulated urine is discharged at a prescribed rate under specified conditions on to a test piece of nonwoven that is superimposed on a standard absorbent media and placed on an inclined table. Any excess liquid that runs down the test piece is collected by a standard receiver pad placed below the lower end of the nonwoven test piece.

The run-off measures the mass of liquid collected by the standard receiver pad.

4.2 Apparatus

4.2.1 Run-off table, of acrylic glass or similar material as shown in Figure 1, the plane of which can be adjusted to the required angle.

The table is inclined at 25° and marked with two reference black lines at 250,0 mm ± 0,2 mm distance (see Figure 2).

The lower line (3,0 mm ± 0,2 mm from the lower end of the table) defines the position of the lower end of the absorbent medium; the upper line (approximately 25 mm from the upper end of the test piece) defines the position of the discharge tube axis.

4.2.2 Clip, or similar with symmetrical reference marks at 140,0 mm ± 0,2 mm (to adjust the axial position of the test pieces).

4.2.3 Spirit level, to ensure axial discharge of the tube.

4.2.4 Support, for placing the standard receiver pad below the lower end of the test piece.

4.2.5 Standard absorbent medium, having the characteristics given below and consisting of two layers of reference filter paper each (140 ± 1) mm × (275 ± 1) mm with the longer side in the machined direction (MD).

Mass per unit area = 124 g/m^2 ± 6 g/m^2

LAC = 500 % ± 30 %;

STT = 3,0 s ± 0,5 s.

where

LAC is the liquid absorptive capacity measured in accordance with ISO 9073-6;

STT is the strike-through time measured without the nonwoven test piece in accordance with ISO 9073-8.

The filter papers are placed smooth/test sides up. (The smooth/test side is determined and indicated by the producer label, it is generally the side in contact with the conveyor wire during the production process, where the wire mark may be visible).