
**Textiles — Test methods
for nonwovens —**

**Part 13:
Repeated liquid strike-through time**

Textiles — Méthodes d'essai pour nontissés —

Partie 13: Temps de transpercement successifs des liquides



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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 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 9073-13 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: Evaluation 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*

The following parts are under preparation:

- *Part 15: Evaluation of air permeability*
- *Part 16: Evaluation of water resistance (hydrostatic pressure test)*

- *Part 17: Evaluation of water penetration (spray impact) test*
- *Part 18: Determination of breaking strength and elongation of nonwoven materials using the grab tensile test*

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Textiles — Test methods for nonwovens —

Part 13:

Repeated liquid strike-through time

1 Scope

This part of ISO 9073 specifies a test method for measuring the strike-through time (STT) for each of three subsequent doses of liquid (simulated urine) applied to the surface of a test piece of nonwoven coverstock. The STT is defined as the time taken for a known volume of liquid to pass through the nonwoven that is in contact with an underlying dry standard absorbent pad.

This test method is intended for quality control and is designed for comparison of STT for different nonwoven coverstocks. It does not simulate in-use conditions for finished products.

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

3 Principle

Three subsequent doses of simulated urine are discharged at a prescribed rate, and under specified conditions, onto a test piece of nonwoven which is placed on a reference absorbent pad. The time taken for each of the liquid doses to penetrate the nonwoven is measured electronically, using conductometric detection. The absorbent pad remains unchanged and wet between the doses.

4 Material and reagents

4.1 Absorbent pad, consisting of ten plies of filter paper (size: 100 mm × 100 mm) with the test side upwards, as specified by the supplier.

The mean STT, in 10 replicate determinations without the nonwoven, shall be within $(1,7 \pm 0,3)$ s.

The liquid absorption capacity, of the paper, as determined by ISO 9073-6, shall be 480 % minimum.

4.2 Simulated urine, consisting of a 9,0 g/l solution of analytical grade sodium chloride in deionized water with a surface tension of (70 ± 2) mN/m at (23 ± 2) °C.

This surface tension should be checked before each series of tests, as surface tension may change during storage.