

STANDARD

9073-2

Second edition
1995-03-15

**Textiles — Test methods for
nonwovens —**

Part 2:
Determination of thickness

*Textiles — Méthodes d'essai pour nontissés —
Partie 2: Détermination de l'épaisseur*



Reference number
ISO 9073-2:1995(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.

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.

International Standard ISO 9073-2 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (ISO 9073-2:1989), which has been technically revised.

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: Determination of bursting stress*
- *Part 6: Determination of absorption*
- *Part 7: Determination of bending length*
- *Part 8: Determination of liquid strike-through time (simulated urine)*
- *Part 9: Determination of drape coefficient*

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Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

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Introduction

Although nonwovens are classified within the textile industry, it should be recognized that nonwovens technologically share characteristics not only with textile products but also with paper and/or plastic products. There is an existing international textile test for the determination of thickness, ISO 5084:—, *Textiles — Determination of the thickness of textiles and textile products (other than textile floor coverings, nonwovens and geotextiles)* [to be published (revision of ISO 5084:1977)]. However, in order to meet the specific needs of nonwovens, alternative requirements to those listed in ISO 5084 are specified in this part of ISO 9073. These are

- a) a different sampling procedure;
- b) specific pressures at which to test normal and bulky nonwovens;
- c) a specific area for the size of the presser-foot;
- d) a shorter time to note the gauge reading.

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Textiles — Test methods for nonwovens —

Part 2: Determination of thickness

1 Scope

This part of ISO 9073 specifies methods for the determination of the thickness, when under a specific pressure, of normal and bulky nonwoven textiles.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9073. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9073 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

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

ISO 186:1994, *Paper and board — Sampling to determine average quality*.

3 Definitions

For the purposes of this part of ISO 9073, the following definitions apply.

3.1 bulky nonwoven: Nonwoven textile which is compressible by 20 % or more when the pressure applied changes from 0,1 kPa to 0,5 kPa.

3.2 thickness: Distance between the face and back of a nonwoven, measured as the distance between a reference plate on which the nonwoven rests and a parallel presser-foot that is applying a pressure to the nonwoven.

4 Principle

Measurement of the thickness of a nonwoven as the distance between the reference plate on which the nonwoven rests and a parallel presser-foot that exerts a specified pressure on the area under test.

5 Apparatus

5.1 For normal nonwovens

5.1.1 Two circular horizontal plates, attached to a stand, comprising an upper plate, or presser-foot, capable of moving vertically and having an area of approximately 2 500 mm², and a reference plate having a plane surface of diameter at least 50 mm greater than that of the presser-foot.

5.1.2 Measuring device, having a scale with 0,01 mm graduations, for measuring the distance between the reference plate and the presser-foot (5.1.1).

5.2 For bulky nonwovens with a maximum thickness of 20 mm

NOTE 1 An example of suitable test apparatus is shown in figure 1.