INTERNATIONAL STANDARD

ISO 14268

IULTCS IUP 15

Third edition
2023-01

Leather — Physical and mechanical tests — Determination of water vapour permeability

Cuir — Essais physiques et mécaniques — Détermination de la perméabilité à la vapeur d'eau

Reference numbers
ISO 14268:2023(E)
IULTCS/IUP 15:2023(E)

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Published in Switzerland

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

IULTCS, originally formed in 1897, is a world-wide organization of professional leather societies to further the advancement of leather science and technology. IULTCS has three Commissions, which are responsible for establishing international methods for the sampling and testing of leather. ISO recognizes IULTCS as an international standardizing body for the preparation of test methods for leather.

This document was prepared by the Physical Tests Commission of the International Union of Leather Technologists and Chemists Societies (IUP Commission, IULTCS), in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 289, *Leather*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 14268:2012), which has been technically revised.

The main changes are as follows:

— Introduction added;

— new Clause 3, Terms and definitions, added;

— new Clause 8 added for the new Procedure B – Accelerated test method.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document describes two methods (Procedure A and Procedure B) for water vapour permeability determination:

— The method in accordance with Procedure A is the standard test method for water vapour permeability determination and is used in any case of discrepancy or dispute.

— The method in accordance with Procedure B is equivalent to the method described in ISO 20344 and can be applied for an accelerated routine control in production processes and/or if requested by the client.

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Leather — Physical and mechanical tests — Determination of water vapour permeability

1 Scope

This document describes a method for determining the water vapour permeability of leather and provides alternative methods of sample preparation and for the measurement procedure.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2418, *Leather — Chemical, physical and mechanical and fastness tests — Sampling location*

ISO 2419, *Leather — Physical and mechanical tests — Sample preparation and conditioning*

ISO 2589, *Leather — Physical and mechanical tests — Determination of thickness*

ISO 5402-1, *Leather — Determination of flex resistance — Part 1: Flexometer method*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Principle

The test piece is clamped over the opening of a container which contains a solid desiccant and is placed in a strong current of air in a standard atmosphere. The air inside the container is constantly agitated by the desiccant, which is kept in motion by the rotation of the container. The container is weighed at the start and the end of the test and the mass of moisture which has been absorbed by the desiccant is determined from the difference.

5 Apparatus

The usual laboratory apparatus and, in particular, the following shall be used.

5.1 Containers, in the form of jars or bottles, with a neck of internal diameter 30 mm ± 3 mm fitted with a screw top with a circular opening whose diameter is equal to the internal diameter of the neck. Suitable containers typically have a height range of 70 mm to 90 mm.

5.2 Test machine, see Annex A for sources of a suitable apparatus, including the following:

5.2.1 Vertically mounted turntable, rotating at (75 ± 5) r/min, capable of holding containers (5.1) with their axis parallel to and (67 ± 2) mm from the axis of rotation of the turntable.

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