

Leather - Physical and mechanical tests - Determination
of softness (ISO 17235:2015)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 17235:2015 sisaldab Euroopa standardi EN ISO 17235:2015 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 17235:2015 consists of the English text of the European standard EN ISO 17235:2015.
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English Version

Leather - Physical and mechanical tests - Determination of softness (ISO 17235:2015)

Cuir - Essais physiques et mécaniques - Détermination de la souplesse (ISO 17235:2015)

Leder - Physikalische und mechanische Prüfungen - Bestimmung der Weichheit (ISO 17235:2015)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN ISO 17235:2015) has been prepared by Technical Committee CEN/TC 289 "Leather", the secretariat of which is held by UNI, in collaboration with Technical Committee IULTCS "International Union of Leather Technologists and Chemists Societies".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

This document supersedes EN ISO 17235:2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 17235:2015 has been approved by CEN as EN ISO 17235:2015 without any modification.

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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 (www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#).

ISO 17235 was prepared by the Physical Test 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*, the secretariat of which is held by UNI, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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 third edition cancels and replaces the second edition (ISO 17235:2011), [4.1](#), [4.1.8](#), [4.2](#), [6.2](#), [6.5](#), [6.8](#), [6.9](#), [Clause 7](#) c), and [Annex A](#) of which have been technically revised.

Leather — Physical and mechanical tests — Determination of softness

1 Scope

This International Standard specifies a non-destructive method for determining the softness of leather. It is applicable to all non-rigid leathers, e.g. shoe upper leather, upholstery leather, leathersgoods leather, and apparel leather.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

3 Principle

A cylindrical rod of defined mass is lowered at a specified rate onto a securely clamped area of leather. The distension of the leather produced is recorded as the softness.

4 Apparatus

4.1 Test machine, shown in [Figure 1](#), including the parts described in [4.1.1](#) to [4.1.7](#).

4.1.1 Circular aperture, A, diameter $35,0 \text{ mm} \pm 0,1 \text{ mm}$.

4.1.2 Metal rings, able to fit into aperture A and reduce the diameter of the aperture to $25,0 \text{ mm} \pm 0,1 \text{ mm}$ and $20,0 \text{ mm} \pm 0,1 \text{ mm}$, respectively.

NOTE The apertures described above are more conveniently referred to by their nominal diameters of 35 mm, 25 mm, and 20 mm, respectively.

4.1.3 Clamps, B, capable of holding the leather securely both before the load pin is released and when the maximum force is applied while leaving the portion over the aperture free to move.

4.1.4 Cylindrical load pin, C, diameter $4,9 \text{ mm} \pm 0,1 \text{ mm}$ and length $11,5 \text{ mm} \pm 0,1 \text{ mm}$ rigidly attached to a cylindrical mass, D. The total mass of load pin and cylindrical load shall be $530 \text{ g} \pm 10 \text{ g}$.

4.1.5 Means of guiding the load pin, such that the load pin acts perpendicularly to the leather surface and the vertical travel of the load pin is restricted to a distance of $11,5 \text{ mm} \pm 0,1 \text{ mm}$.

4.1.6 Means of lowering the load pin, such that the load pin travels its full permitted distance of $11,5 \text{ mm} \pm 0,1 \text{ mm}$ in $1,5 \text{ s} \pm 0,5 \text{ s}$.

4.1.7 Gauge, reading to 0,1 mm, to directly measure the distension of the leather by the load pin.