INTERNATIONAL STANDARD

ISO 17235

IULTCS/IUP 36

Third edition
2015-09-01

Leather — Physical and mechanical tests — Determination of softness

Cuir — Essais physiques et mécaniques — Détermination de la souplesse

Reference numbers
ISO 17235:2015(E)
IULTCS/IUP 36:2015(E)

© ISO 2015



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative references **1**
3 Principle **1**
4 Apparatus **1**
5 Sampling and sample preparation **2**
6 Procedure **2**
7 Test report **3**
Annex A (informative) **Source of apparatus** **4**

© ISO 2015 – All rights reserved

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).

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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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.

© ISO 2015 – All rights reserved

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, leathergoods 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 mm ± 0,1 mm.

4.1.2 Metal rings, able to fit into aperture A and reduce the diameter of the aperture to 25,0 mm ± 0,1 mm and 20,0 mm ± 0,1 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 mm ± 0,1 mm and length 11,5 mm ± 0,1 mm rigidly attached to a cylindrical mass, D. The total mass of load pin and cylindrical load shall be 530 g ± 10 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 mm ± 0,1 mm.

4.1.6 Means of lowering the load pin, such that the load pin travels its full permitted distance of 11,5 mm ± 0,1 mm in 1,5 s ± 0,5 s.

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

© ISO 2015 – All rights reserved