

**Leather - Physical and mechanical tests -  
Determination of softness**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 17235:2003 sisaldab Euroopa standardi EN ISO 17235:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.02.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 17235:2003 consists of the English text of the European standard EN ISO 17235:2002.</p> <p>This document is endorsed on 18.02.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This European Standard specifies a non destructive method for determining the softness of a leather. It is applicable to all non-rigid leathers. e.g. Shoe upper leather, upholstery leather, leathergoods leather and apparel leather</p>	<p><b>Scope:</b></p> <p>This European Standard specifies a non destructive method for determining the softness of a leather. It is applicable to all non-rigid leathers. e.g. Shoe upper leather, upholstery leather, leathergoods leather and apparel leather</p>
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**Võtmesõnad:** flexible materials, leather, leathercloth, mechanical testing, physical testing, softness, testing

**English version**

**Leather**

**Physical and mechanical tests – Determination of softness  
(ISO 17235 : 2002)**

Cuir – Essais physiques et mécaniques – Détermination de la souplesse (ISO 17235 : 2002)

Leder – Physikalische und mechanische Prüfungen – Bestimmung der Weichheit (ISO 17235 : 2002)

This European Standard was approved by CEN on 2002-06-08.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Management Centre: rue de Stassart 36, B-1050 Brussels**

Foreword

International Standard  
ISO 17235 : 2002 Leather – Physical and mechanical tests – Determination of softness,  
which was prepared by ISO/TC 120 ‘Leather’ of the International Organization for Standardization, has been adopted  
by Technical Committee CEN/TC 289 ‘Leather’, the Secretariat of which is held by UNI, as a European Standard.  
This European Standard shall be given the status of a national standard, either by publication of an identical text or  
by endorsement, and conflicting national standards withdrawn, by June 2003 at the latest.  
In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following  
countries are bound to implement this European Standard:  
Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy,  
Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 17235 : 2002 was approved by CEN as a European Standard without any  
modification as given above.

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## 1 Scope

This International Standard specifies a non destructive method for determining the softness of a 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 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 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 diagrammatically 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  $\pm$  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  $\pm$  0,1 mm and 20,0  $\pm$  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, whilst leaving the portion over the aperture free to move.

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