

**Leather - Physical and mechanical tests -  
Determination of shrinkage temperature up  
to 100 degrees C**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 3380:2003 sisaldab Euroopa standardi EN ISO 3380:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 15.04.2003 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 3380:2003 consists of the English text of the European standard EN ISO 3380:2002.</p> <p>This document is endorsed on 15.04.2003 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> This International Standard specifies a methods for determination of the shrinkage temperature of leather up to 100°C. It is applicable to all leather</p>	<p><b>Scope:</b> This International Standard specifies a methods for determination of the shrinkage temperature of leather up to 100°C. It is applicable to all leather</p>
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**ICS** 59.140.30

**Võtmesõnad:**

ICS 59.140.30

**English version**

**Leather**

**Physical and mechanical tests – Determination of shrinkage  
temperature up to 100 °C  
(ISO 3380 : 2002)**

Cuir – Essais physiques et mécaniques – Détermination de la température de rétrécissement jusqu'à 100 °C (ISO 3380 : 2002)

Leder – Physikalische und mechanische Prüfungen – Bestimmung der Schrumpfungstemperatur bis 100 °C (ISO 3380 : 2002)

This European Standard was approved by CEN on 2002-09-05.

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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.

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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 3380 : 2002 Leather – Physical and mechanical tests – Determination of shrinkage temperature up to 100 °C, 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 3380 : 2002 was approved by CEN as a European Standard without any modification as given above.  
NOTE: Normative references to international publications are listed in Annex ZA (normative).

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## 1 Scope

This International Standard specifies a method for determination of the shrinkage temperature of leather up to 100 °C. It is applicable to all leathers.

## 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 2589 *Leather - Physical and mechanical tests - Determination of thickness*

ISO 3696:1987 *Water for analytical laboratory use - Specification and test methods*

## 3 Principle

The test piece is heated at a specified rate in water until a sudden shrinkage occurs.

## 4 Apparatus

**4.1** A schematic layout of a suitable instrument is shown in figure 1. The instrument should include the following parts:

**4.1.1 Vessel**, minimum volume 500 ml and minimum working depth 110 mm. The vessel may be pressurised to operate at temperatures in excess of 100 °C.

**4.1.2 Fixed test piece holder**, for example a pin or clip, 30 mm  $\pm$  5 mm above the base of the vessel.

**4.1.3 Moveable test piece holder**, for example a hook or clip. One end is attached to the top of the test piece. The other end is attached to a thread which passes over a pulley and terminates in a mass 3 g heavier than the moveable holder.

**4.1.4 Pointer**, with means of monitoring its movement. In the instrument shown, the relative dimensions of the pulley and pointer shall be such that any movement of the moveable holder (4.1.3) is magnified by a factor of at least 5.

**4.1.5 Temperature measuring device**, graduated to 1 °C and shown to be accurate to  $\pm$  0,5 °C with the sensor placed close to the centre of the test piece and a working range suitable for the sample under test.

**4.1.6 Distilled or de-ionized water**, conforming to the requirements of grade 3 of ISO 3696:1987.

**4.1.7 Heater**, capable of heating the vessel filled to its working depth with distilled or deionized water at a rate of 2 °C  $\pm$  0,2 °C/min.

**4.1.8 Stirrer**, capable of sufficiently agitating the water in the vessel such that the temperatures at the top and bottom of the test piece do not differ by more than 1 °C.