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**Leather — Guide to the selection of  
leather for apparel (excluding furs)**

*Cuir — Guide pour la sélection des cuirs pour vêtements (à l'exclusion  
des fourrures)*

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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 14931 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 120, *Leather*, Subcommittee SC 2, *Tanned leather*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read “...this European Standard...” to mean “...this International Standard...”.

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## Contents

Introduction .....	vi
1 Scope .....	1
2 Normative references .....	1
3 Definitions .....	1
4 Sampling .....	1
5 Conditioning and sampling preparation .....	2
6 Characteristics, test methods and recommended values .....	2
7 Test report .....	2
Bibliography .....	4

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## Foreword

This document (EN ISO 14931:2004) has been prepared by Technical Committee CEN/TC 289 “Leather”, the secretariat of which is held by UNI, in collaboration with Technical Committee ISO/TC 120 “Leather”.

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of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

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

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## Introduction

This document was prepared by CEN/TC 289 "Leather" in order to provide the leather and apparel industries with guidelines on which seller and buyer can base their negotiations.

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## 1 Scope

This document gives recommended values and related test methods for apparel leather excluding furs. This document also specifies the sampling and conditioning procedures of laboratory samples.

This document does not apply to leather materials with coating thickness exceeding 0,15 mm.

## 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.

EN ISO 105-B02	<i>Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test (ISO 105-B02:1994)</i>
EN ISO 2418	<i>Leather – Chemical, physical, mechanical and fastness tests – Sampling location (ISO 2418:2002)</i>
EN ISO 2419	<i>Leather – Physical and mechanical tests – Sample preparation and conditioning (ISO 2419:2002)</i>
EN ISO 3377-1	<i>Leather – Physical and mechanical tests – Determination of tear load – Part 1: Single edge tear (ISO 3377-1:2002)</i>
EN ISO 4044	<i>Leather - Preparation of chemical test samples (ISO 4044:1977)</i>
EN ISO 4045	<i>Leather - Determination of pH (ISO 4045:1977)</i>
EN ISO 5402	<i>Leather – Physical and mechanical tests – Determination of flex resistance by flexometer method (ISO 5402:2002)</i>
EN ISO 11640	<i>Leather - Tests for colour fastness - Colour fastness to cycles of to-and-fro rubbing (ISO 11640:1993)</i>
EN ISO 11641	<i>Leather - Tests for colour fastness - Colour fastness to perspiration (ISO 11641:1993)</i>
EN ISO 11642	<i>Leather - Tests for colour fastness - Colour fastness to water (ISO 11642:1993)</i>
EN ISO 11643	<i>Leather - Tests for colour fastness - Colour fastness of small samples to dry-cleaning solutions (ISO 11643:1993)</i>
EN ISO 11644	<i>Leather - Tests for adhesion of finish (ISO 11644:1993)</i>
EN ISO 15700	<i>Leather – Tests for colour fastness – Colour fastness to water spotting (ISO 15700:1998)</i>
EN ISO 17186	<i>Leather – Physical and mechanical tests – Determination of surface coating thickness (ISO 17186:2002)</i>
EN ISO 17233	<i>Leather – Physical and mechanical tests – Determination of cold crack temperature of surface coatings (ISO 17233:2002)</i>
ISO 2588	<i>Leather - Sampling - Number of items for a gross sample</i>

## 3 Definitions

For the purpose of this document the definitions given in the "International Glossary of Leather Terms" apply.

## 4 Sampling

**4.1** The number of leathers to be tested shall be in accordance with ISO 2588, if not otherwise agreed by the parties.

4.2 Laboratory samples shall be located and identified in accordance with EN ISO 2418.

## 5 Conditioning and sampling preparation

5.1 Laboratory samples for physical, mechanical and fastness shall be conditioned and prepared in accordance with EN 2419.

5.2 Laboratory samples for chemical tests shall be conditioned and prepared in accordance with EN ISO 4044.

## 6 Characteristics, test methods and recommended values

In Table 1 and Table 2 are stated the characteristics, test methods and recommended values for different types of leather intended for apparel. The essential characteristics (Table 1) shall be taken all into account, even if they can have different relative weight in the process of evaluation relative to use. The subsidiary characteristics (Table 2) shall be agreed by the parties concerned according to the intended use of the leather.

The coating thickness of leather shall be measured according to EN ISO 17186.

## 7 Test report

The test report shall contain at least the following information:

- a) reference to this document;
- b) identification of test sample and if required, sampling procedure;
- c) date and place of the tests;
- d) test results and number of test specimens;
- e) conditioning and test atmosphere used;
- f) any deviation from this document.

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**Table 1 - Essential characteristics, recommended values and test methods for apparel leather**

Leather characteristics	Recommended value	Test methods
Colour fastness to light	aniline $\geq 2/3$ blue scale nubuck $\geq 3$ blue scale suede $\geq 3$ blue scale  Other finishing $\geq 4$ blue scale	EN ISO105-B02
Colour fastness to to-and-fro rubbing	Change of colour and staining of the felt pad to be assessed  Dry felt 50 cycles $\geq 3$ grey scale Wet felt 20 cycles $\geq 2/3$ grey scale Perspiration 10 cycles $\geq 2/3$ grey scale	EN ISO 11640 EN ISO 11641
Colour fastness to water spotting referring to the residual halo after 24 h	$\geq 3$ grey scale (no blistering of the leather surface or other permanent physical effects and no salt spew formation)	EN ISO 15700
Colour fastness to Dry cleaning	$\geq 3$ grey scale no finish lost (no re-oiling)	EN ISO 11643
Flexing resistance (only for pigmented leathers)	20 000 cycles (no damage)	EN ISO 5402
Tear strength	$\geq 20$ N Leathers with tear strength $\geq 10$ N are fully usable; provided care is taken in design and construction of apparel	EN ISO 3377-1
pH and $\Delta$ pH	$\geq 3,2$ If the pH value is below 4 $\Delta$ pH shall be $\leq 0,7$	EN ISO 4045

**Table 2 - Subsidiary characteristics, recommended values and test methods for apparel leather**

Leather characteristics	Recommended value	Test methods
Fastness to water	$\geq 3$ grey scale	EN ISO 11642
Finish adhesion (only for pigmented leathers)	$\geq 2$ N/10 mm dry adhesion	EN ISO 11644
Cold crack resistance (only for pigmented leathers)	$-10^{\circ}$ C (no damage)	EN ISO 17233