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**Leather — Upholstery leather  
characteristics — Selection of leather for  
furniture**

*Cuir — Caractéristiques des cuirs pour garniture — Sélection des cuirs  
pour l'ameublement*



Reference number  
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## Foreword

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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 16131 was prepared by Technical Committee ISO/TC 120, *Leather*, Subcommittee SC 2, *Tanned leather*.

It is based on EN 13336:2004, *Leather — Upholstery leather characteristics — Guide for selection of leather for furniture*.



# Leather — Upholstery leather characteristics — Selection of leather for furniture

## 1 Scope

This International Standard specifies sampling and test methods, and gives recommended values for, upholstery leather for furniture.

## 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 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

ISO 2418, *Leather — Chemical, physical and mechanical and fastness tests — Sampling location*

ISO 2419, *Leather — Physical and mechanical tests — Sample preparation and conditioning*

ISO 2588, *Leather — Sampling — Number of items for a gross sample*

ISO 3377-1, *Leather — Physical and mechanical tests — Determination of tear load — Part 1: Single edge tear*

ISO 4044, *Leather — Chemical tests — Preparation of chemical test samples*

ISO 4045, *Leather — Chemical tests — Determination of pH*

ISO 5402-1, *Leather — Determination of flex resistance — Part 1: Flexometer method*

ISO 8191-1, *Furniture — Assessment of the ignitability of upholstered furniture — Part 1: Ignition source: smouldering cigarette*

ISO 8191-2, *Furniture — Assessment of the ignitability of upholstered furniture — Part 2: Ignition source: match-flame equivalent*

ISO 11640, *Leather — Tests for colour fastness — Colour fastness to cycles of to-and-fro rubbing*

ISO 11641, *Leather — Tests for colour fastness — Colour fastness to perspiration*

ISO 11644, *Leather — Test for adhesion of finish*

ISO 15700, *Leather — Tests for colour fastness — Colour fastness to water spotting*

ISO 17233, *Leather — Physical and mechanical tests — Determination of cold crack temperature of surface coatings*

### 3 General principles

This International Standard considers the performance of different types of leather intended for upholstery. The characteristics, recommended values, and test methods are specified in Tables A.1, A.2, and A.3. Subsidiary characteristics are stated in Table A.4.

### 4 Sampling

**4.1** When possible, the location and identification of laboratory samples shall be in accordance with ISO 2418.

**4.2** The number of samples shall be by agreement between the interested parties except in cases of dispute when the number of samples shall be in accordance with ISO 2588. If the lot size of the leathers is high, the maximum number of samples shall be five.

### 5 Conditioning and sampling preparation

Leather samples shall be conditioned and prepared for physical, mechanical and fastness tests in accordance with ISO 2419.

Leather samples for chemical tests shall be conditioned and prepared in accordance with ISO 4044.

### 6 Characteristics, test methods, and recommended values

The essential characteristics stated in Tables A.1, A.2, and A.3 shall all be taken into account, even if they can have different relative weight in the process of evaluation relative to use. The subsidiary characteristics stated in Table A.4 shall be agreed by the parties concerned according to the intended end use of the leather.

### 7 Test report

The test report shall contain at least the following information:

- a) reference to this International Standard;
- b) all information necessary for the complete identification of the sample;
- c) the sampling method used, if required;
- d) date and place of the test;
- e) test results and number of test specimens;
- f) conditioning and test atmosphere used;
- g) any deviation from this International Standard.

## Annex A (normative)

### Selection criteria for upholstery leather for furniture

#### A.1 Essential characteristics, recommended values, and test methods for upholstery leather for furniture

See Tables A.1 to A.3.

**Table A.1 — Aniline, suède and nubuck**

Leather characteristic	Recommended value	Test method
Colour fastness to — to-and-fro rubbing, dry, 50 cycles, grey scale — to-and-fro rubbing, wet, 20 cycles, grey scale  — perspiration, 20 cycles, grey scale	Change of leather colour and pad staining  $\geq 3$  $\geq 3$  $\geq 3$	ISO 11640  ISO 11640  ISO 11641 in which perspiration solution is defined
	While these values are typical of those expected, it is advisable to issue appropriate guidance with upholstered furniture to inform consumers of likely performance as well as in-service care and maintenance instructions to avoid unnecessary problems.	
Colour fastness to — light, blue scale	$\geq 3$	ISO 105-B02
pH of water extract If the pH value is below 4, $\Delta$ pH	$\geq 3,2$ $\leq 0,7$	ISO 4045
Tear strength, N	$\geq 20$	ISO 3377-1

Table A.2 — Semi-aniline

Leather characteristic	Recommended value	Test method
Colour fastness to — to-and-fro rubbing, dry, 500 cycles, grey scale  — to-and-fro rubbing, wet, 80 cycles, grey scale  — perspiration, 50 cycles, grey scale	Change of leather colour and pad staining  ≥4	ISO 11640
	3 to 4  3 to 4	ISO 11640  ISO 11641 in which perspiration solution is defined
While these values are typical of those expected, it is advisable to issue appropriate guidance with upholstered furniture to inform consumers of likely performance as well as in-service care and maintenance instructions to avoid unnecessary problems.		
Colour fastness to — light, blue scale	≥4	ISO 105-B02
Finish adhesion, dry, N/10 mm	≥2	ISO 11644
pH of water extract  If the pH value is below 4, ΔpH	≥3,2  ≤0,7	ISO 4045
Tear strength, N	≥20	ISO 3377-1



Table A.3 — Pigmented

Leather characteristic	Recommended value	Test method
Colour fastness to — to-and-fro rubbing, dry, 500 cycles, grey scale — to-and-fro rubbing, wet, 250 cycles, grey scale — perspiration, 80 cycles, grey scale	Change of leather colour and pad staining  ≥4	ISO 11640
	3 to 4  3 to 4	ISO 11640  ISO 11641 in which perspiration solution is defined
While these values are typical of those expected, it is advisable to issue appropriate guidance with upholstered furniture to inform consumers of likely performance as well as in-service care and maintenance instructions to avoid unnecessary problems.		
Colour fastness to — light, blue scale	≥5	ISO 105-B02
Finish adhesion, N/10 mm	≥2	ISO 11644
Flexing endurance	≥50 000 cycles (no finish damage cracks)	ISO 5402-1
pH of water extract If the pH value is below 4, ΔpH	≥3,2  ≤0,7	ISO 4045
Tear strength, N	≥20	ISO 3377-1

## A.2 Subsidiary characteristics, recommended values, and test methods for upholstery leather for furniture

See Table A.4.

Table A.4 — All leather types

Leather characteristic	Recommended value	Test method
Burning behaviour	Pass	ISO 8191-1 and ISO 8191-2 No soaking
Cold crack resistance of finish, -15 °C	No finish cracks	ISO 17233
Colour fastness to water spotting, grey scale	≥3 (No permanent swelling)	ISO 15700

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