



DPC: 24/30477458 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

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Introduction

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For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 4211-6

Furniture — Tests for surface finishes —

Part 6: Assessment of the surface resistance to scratching

ICS: 97.140

ISO/TC 136

Secretariat: **UNI**

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2024-12-10

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2025-03-04

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
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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 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 136, *Furniture*.

A list of all parts in the ISO 4211 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Furniture — Tests for surface finishes —

Part 6: Assessment of the surface resistance to scratching

1 Scope

This document specifies two methods for the assessment of the surface resistance to different kinds of visible scratches.

It relates to the rigid surfaces of all finished products, regardless of their material.

It does not apply to finishes on leather and fabrics.

Method A is suitable for all types of surface coatings and coverings except for melamine faced boards (according to EN 14322) and HPL (according to EN 438-1). It simulates measurable penetrating and/or deforming scratches.

Method B is suitable for all types of surfaces. It simulates first visible traces (e.g. scratches, marks) that can also be a change in the gloss.

The test is intended to be carried out on a part of finished furniture. It can, however, be carried out on test panels of the same material, finished in an identical manner to the finished product, and of a size sufficient to meet the requirements of the test.

It is essential that the test be carried out on unused surfaces without any defects or damages.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1518-1, *Paints and varnishes — Determination of scratch resistance — Part 1: Constant-loading method*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

test surface

part of the test panel

3.2

test panel

panel including the test surface

Note 1 to entry: The panel may be cut from a finished item of furniture or it may be a separate panel produced in the same manner as the finished item of furniture.

3.3

test area

part of the test surface under the equipment, where the measurement is carried out

3.4

scratching tip

needle with a point of defined geometry

Note 1 to entry: See [4.2.3](#) for method A.

Note 2 to entry: See [5.2.1.6](#) for method B.

3.5

scratching trace

3.5.1

method A

visible and measurable scratch on the tested surface which is produced under the specified load of the scratching tip; the shapes of the traces' edges can be different depending on the substrate and coating type as shown in [Table 2](#)

3.5.2

method B

first visible traces on the tested surface (e.g. scratches, marks) which may also be a change in the gloss

3.6

scratching resistance

3.6.1

method A

minimum load, in N, applied to the scratching tip, which produces a measurable trace of the width (W) of $\geq 0,30$ mm

3.6.2

method B

minimum load, in N, applied to the scratching tip, which produces a continuous visible trace in at least six of eight slots of the template

3.7

preliminary assessments of scratching resistance (method A)

assessment of minimum load causing the specified width of scratch on test surface

3.8

intermediate assessment of scratching resistance (method A)

mean value of preliminary assessments of test surface

3.9

final result of scratching resistance (method A)

mean value of intermediate assessments of three test surfaces

Note 1 to entry: See [Figure A.2](#) in the informative [Annex A](#).