

Furniture - Assessment of the surface resistance to
microscratching

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16611:2023 sisaldab Euroopa standardi EN 16611:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 16611:2023 consists of the English text of the European standard EN 16611:2023.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.04.2023.	Date of Availability of the European standard is 26.04.2023.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 97.140

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis-ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis-ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Furniture - Assessment of the surface resistance to microscratching

Ameublement - Évaluation de la résistance des surfaces aux micro-rayures

Möbel - Bestimmung der Mikrokratzbeständigkeit von Möbeloberflächen

This European Standard was approved by CEN on 17 March 2023.

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 CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions.....	4
4 Principle.....	5
5 Apparatus and materials.....	5
5.1 Martindale tester	5
5.2 Holder for scrub material	5
5.3 Diffuse light source.....	5
5.4 Glossmeter.....	6
5.5 Positioning device	6
5.6 Scrub materials.....	6
5.7 Double-sided tape.....	7
5.8 Cleaning cloth.....	7
5.9 Reference black high gloss HPL	7
6 Assembly and maintenance of the Martindale tester	7
7 Preparation and conditioning.....	7
7.1 Conditioning	7
7.2 Test surface.....	7
8 Test procedure.....	7
8.1 General.....	7
8.2 Testing	8
8.2.1 Procedure A	8
8.2.2 Procedure B	9
9 Test report.....	9
Annex A (normative) Method for checking the Lissajous figure.....	10
Annex B (normative) Classification of the image after scratching according to procedure B	11

European foreword

This document (EN 16611:2023) has been prepared by Technical Committee CEN/TC 207 “Furniture”, the secretariat of which is held by UNI.

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 October 2023, and conflicting national standards shall be withdrawn at the latest by October 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 16611:2016.

The main changes compared to the previous edition are listed below:

- revised Clause 5 regarding 5.1 “Martindale tester”, 5.3 “Diffuse light source”, 5.6 “Scrub materials”, 5.9 “Reference black high gloss HPL”;
- additional test parameter “load” added to Table 1;
- revised 8.2.1 “Procedure A” regarding calibration of ultra fine scrub material and microscratching of test area;
- revised 8.2.2 “Procedure B” regarding microscratching of test area;
- revised explanation in Table B.1;
- document editorially revised in its entirety.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

1 Scope

This document specifies a method for the assessment of the surface resistance to microscratching and relates to rigid surfaces of all finished products, considering the following exceptions:

- Method A is suitable for all types of surface coatings and coverings except for lacquers with pearly or metallic effects.
- Method B is suitable for all types of surface.
- No method applies to finishes on leather and fabrics.

This document is applicable to the test intended to be carried out on a part of finished furniture, but it can 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.

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.

EN ISO 2813, *Paints and varnishes - Determination of gloss value at 20°, 60° and 85° (ISO 2813)*

EN ISO 12945-2, *Textiles - Determination of fabric propensity to surface pilling, fuzzing or matting - Part 2: Modified Martindale method (ISO 12945-2)*

EN ISO 12947-1, *Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 1: Martindale abrasion testing apparatus (ISO 12947-1)*

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:

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

3.1

test surface

part of the test panel

3.2

test panel

panel including the test surface

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

3.3

test area

part of the test surface affected by the scrub material (5.6)