

Laminate floor coverings - Elements with acrylic based surface layer, electron beam cured - Specifications, requirements and test methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 14978:2016+A1:2021 sisaldab Euroopa standardi EN 14978:2016+A1:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 14978:2016+A1:2021 consists of the English text of the European standard EN 14978:2016+A1:2021.
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 22.09.2021.	Date of Availability of the European standard is 22.09.2021.
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](mailto:standardiosakond@evs.ee).

ICS 97.150

**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 autoriõiguse kaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto: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 standards copyright protection, please contact the Estonian Centre for Standardisation and Accreditation: Homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

English Version

Laminate floor coverings - Elements with acrylic based  
surface layer, electron beam cured - Specifications,  
requirements and test methods

Revêtements de sol stratifiés - Éléments à parement à  
base acrylique traités par des faisceaux d'électrons -  
Spécifications, exigences et méthodes d'essai

Laminatböden - Elemente mit einer  
elektronenstrahlgehärteten Deckschicht auf Acryl-  
Basis - Spezifikationen, Anforderungen und  
Prüfverfahren

This European Standard was approved by CEN on 27 November 2015 and includes Amendment 1 approved by CEN on 18 July 2021.

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, Turkey 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

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>6</b>
<b>4 Characteristics</b> .....	<b>7</b>
<b>5 Classification</b> .....	<b>7</b>
5.1 <b>General</b> .....	<b>7</b>
5.2 <b>Floor coverings with a common gloss level</b> .....	<b>7</b>
5.3 <b>Floor coverings with a high gloss level</b> .....	<b>8</b>
<b>6 Additional characteristics and requirements</b> .....	<b>9</b>
<b>7 Marking, designation and packaging</b> .....	<b>9</b>
7.1 <b>Marking</b> .....	<b>9</b>
7.2 <b>Packaging</b> .....	<b>10</b>
<b>8 Test report</b> .....	<b>11</b>
<b>Bibliography</b> .....	<b>12</b>

## European foreword

This document (EN 14978:2016+A1:2021) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile and laminate floor coverings”, the secretariat of which is held by NBN.

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 March 2022, and conflicting national standards shall be withdrawn at the latest by March 2022.

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 A1 EN 14978:2016 A1.

This document includes Amendment 1 approved by CEN on 18 July 2021.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

A1 In comparison with EN 14978:2016 (original version), the new consolidated version EN 14978:2016+A1:2021 (new version of EN 14978:2016), contains the following technical modifications:

- Normative references: replace EN 424, *Resilient floor coverings - Determination of the effect of simulated movement of a furniture leg* with EN ISO 16581, *Resilient and laminate floor coverings — Determination of the effect of simulated movement of a furniture leg*;
- Normative references: add EN 17368, *Laminate floor coverings — Determination of impact resistance with small ball*;
- Scope: replacement of the last paragraph;
- term 3.3 substrate: replacement of the definition;
- Table 1: change the requirements and test method for impact resistance: small ball and addition of footnote to table <sup>c</sup> as clarification for testing; replacement of Table 1. A1

Compared to EN 14978:2006 the following changes have been made A1 in EN 14978:2016 A1:

- a) general definition for laminate floor coverings included;
- b) defined underlay for impact resistance test with the large diameter ball added;
- c) requirements for castor chair test changed;
- d) requirements for level of use 32 and 33 for floor coverings with a high gloss level added;
- e) test method and requirements for abrasion resistance for floor coverings with a high gloss level changed;
- f) requirements for cigarette resistance deleted;
- g) technical characteristic micro-scratch resistance added.

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, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies characteristics, requirements and test methods for laminate floor coverings with acrylic based surface layer, electron beam cured as defined in 3.1 and 3.2.

It includes a classification system based on EN ISO 10874, giving practical requirements for areas of use and levels of use, to indicate where laminate floor coverings will give satisfactory service and to encourage the consumer to make an informed choice. It also specifies requirements for marking and packaging.

Ⓐ<sub>1</sub> Laminate floor coverings are generally designed for floating installations and are considered for domestic and commercial levels of use, including domestic kitchens. This document does not specify requirements relating to the use in areas which are subjected to frequent wetting, such as bathrooms, laundry rooms or saunas. In general laminate floor coverings can only be used in those areas when authorized by the manufacturer and under conditions described in the manufacturer's installation guidelines. Ⓐ<sub>1</sub>

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 322, *Wood-based panels - Determination of moisture content*

Ⓐ<sub>1</sub> EN ISO 16581, *Resilient and laminate floor coverings — Determination of the effect of simulated movement of a furniture leg (ISO 16581)* Ⓐ<sub>1</sub>

EN 425:2002, *Resilient and laminate floor coverings - Castor chair test*

EN 438 (all parts), *High-pressure decorative laminates (HPL) — Sheets based on thermosetting resins (Usually called Laminates)*

Ⓐ<sub>1</sub> EN 13329:2016+A2:2021 Ⓐ<sub>1</sub>, *Laminate floor coverings — Elements with a surface layer based on aminoplastic thermosetting resins — Specifications, requirements and test methods*

Ⓐ<sub>1</sub> EN 15468:2016+A1:2021 Ⓐ<sub>1</sub>, *Laminate floor coverings — Elements with directly applied printing and resin surface layer — Specifications, requirements and test methods*

EN 16094, *Laminate floor coverings - Test method for the determination of micro-scratch resistance*

Ⓐ<sub>1</sub> EN 17368, *Laminate floor coverings — Determination of impact resistance with small ball* Ⓐ<sub>1</sub>

CEN/TS 16354, *Laminate floor coverings - Underlays - Specification, requirements and test methods*

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

EN ISO 10874, *Resilient, textile and laminate floor coverings - Classification (ISO 10874)*

ISO 24334, *Laminate floor coverings -- Determination of locking strength for mechanically assembled panels*

ISO 24336, *Laminate floor coverings — Determination of thickness swelling after partial immersion in water*