ILNAS

Institut luxembourgeois de la normalisation
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des produits et services

# ILNAS-EN 15468:2016+A1:2021

## Laminate floor coverings - Elements with directly applied printing and resin surface layer - Specifications, requirements and test methods

Laminatböden - Direktbedruckte Elemente mit Kunstharz-Deckschicht - Spezifikationen, Anforderungen und Prüfverfahren

Revêtements de sol stratifiés - Éléments comportant une couche d'impression appliquée directement et une couche de surface à base de résine - Spécifications,

09/2021

**National Foreword**

This European Standard EN 15468:2016+A1:2021 was adopted as Luxembourgish Standard ILNAS-EN 15468:2016+A1:2021.

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# EUROPEAN STANDARD
# NORME EUROPÉENNE
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Revêtements de sol stratifiés - Éléments comportant une couche d'impression appliquée directement et une couche de surface à base de résine - Spécifications, exigences et méthodes d'essai

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

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

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



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## European foreword

This document (EN 15468:2016+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of an identical text or by endorsement, at the latest by March 2022, and conflicting national standards shall be withdrawn at the latest by March 2022.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 15468:2016 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 15468:2016 (original edition), the new consolidated version EN 15468:2016+A1:2021 (new version of EN 15468:2016), 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 [c] as clarification for testing; replacement of Table 1. A1

Compared to EN 15468:2007, the following changes have been made A1 in EN 15468:2016 A1:

a) general definition for laminate floor coverings included;

b) test method for abrasion resistance based on falling sand method and requirements based on this test method added;

c) defined underlay for impact resistance test with the large diameter ball added;

d) Table 1 (classification requirements) changed in accordance with EN 13329:2016, Table 2 (classification requirements);

e) 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, states requirements and gives test methods for laminate floor coverings (as defined in 3.1).

It includes a classification system, based on EN ISO 10874, providing 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.

〚A1〛 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. 〚/A1〛

## 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*

〚A1〛 EN ISO 16581, *Resilient and laminate floor coverings — Determination of the effect of simulated movement of a furniture leg (ISO 16581)* 〚/A1〛

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)*

EN 13329:2016, *Laminate floor coverings — Elements with a surface layer based on aminoplastic thermosetting resins — Specifications, requirements and test methods*

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

〚A1〛 EN 17368, *Laminate floor coverings — Determination of impact resistance with small ball* 〚/A1〛

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

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

EN ISO 868:2003, *Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)*

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*

ASTM D785, *Standard Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials*

FEPA standard 42-D, *Grains of fused aluminium oxide, silicon carbide and other abrasive materials for bonded abrasives and for general industrial applications*

FEPA standard 44-D, *Grains of fused aluminium oxide, silicon carbide and other abrasive materials. Determination of bulk density*

## 3 Terms and definitions

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

NOTE This European Standard specifies characteristics, requirements and test methods for laminate floor coverings with directly applied printing and resin surface layer as defined in 3.1 and 3.2.

**3.1**
**laminate floor covering**
rigid floor covering, typically in a plank or tile format, with a multiple layer structure: e.g. backer, substrate and décor

Note 1 to entry: The planks/tiles have worked edges that allow the product to be joined together to form a larger integral unit. The product may vary in surface texture and gloss level.

Note 2 to entry: Laminate flooring does not include products having a resilient, stone, textile, wood, leather or metal top surfacing material(s).

**3.2**
**resin based surface layer**
upper decorative layer intended to be the visible side when the floor is installed, consisting of resins (usually acrylate, methacrylate or similar) which are cured using UV radiation or other curing methods

Note 1 to entry: It can exhibit impregnated and coated materials (generally décor paper), or at least one paint or varnish layer applied direct on the board using indirect printing, direct printing or digital printing. The combination of the multi-layered surface produced with this technique is called Printed Décor Laminate (PDL).

**3.3**
**substrate**
[A1⟩ core material of the laminate floor covering containing wood for at least 65 % in mass ⟨A1]

Note 1 to entry: It is generally a particleboard, as defined in EN 309, or a Dry process fibreboard (MDF) as defined in EN 316 or a so called High Density Fibreboard (HDF) which is a MDF-board with a density ≥ 800 kg/m$^3$.

**3.4**
**backer**
layer opposite to the surface layer used to balance and stabilize the product

Note 1 to entry: The backer is generally made of impregnated papers

**3.5**
**underlay**
layer placed between the laminate floor covering and the subfloor to impart specific properties

Note 1 to entry: Some laminate floor covering products have the underlay pre-attached directly to the backer.

**3.6**
**laminate floor covering element**
piece of the floor covering with profiled edges to facilitate assembly at installation