



# SLOVENSKI STANDARD

## SIST EN 12104:2023

01-julij-2023

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### Netekstilne talne obloge - Talne obloge iz plute - Specifikacija

Resilient floor coverings - Cork floor tiles - Specification

Elastische Bodenbeläge - Presskorkplatten - Spezifikation

Revêtements de sols résilients - Dalles en liège - Spécification

Ta slovenski standard je istoveten z: **EN 12104:2023**

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#### ICS:

79.100	Pluta in izdelki iz plute	Cork and cork products
97.150	Talne obloge	Floor coverings

**SIST EN 12104:2023**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 12104

May 2023

ICS 79.100; 97.150

Supersedes EN 12104:2018

English Version

Resilient floor coverings - Cork floor tiles - Specification

Revêtements de sol résilients - Dalles en liège -  
Spécification

Elastische Bodenbeläge - Presskorkplatten -  
Spezifikation

This European Standard was approved by CEN on 28 February 2023.

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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.

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

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## European foreword

This document (EN 12104:2023) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile, laminate and modular mechanical locked 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of an identical text or by endorsement, at the latest by November 2023, and conflicting national standards shall be withdrawn at the latest by November 2023.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 EN 12104:2018.

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

- Scope review.
- Normative references.
- General requirements:
  - 1) Dimensional stability requirement and test method.
- Classification requirements:
  - 1) Residual indentation requirements review based on apparent density value.
  - 2) Effect of Castor chair requirements review, surface type notes and test method update.
  - 3) Wear resistance eliminate option EN 13329:2016+A1:2017, Annex E, and requirements review for varnish surfaces.
- Optional Properties review.
- Bibliography update.

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.

## EN 12104:2023 (E)

## 1 Scope

This document specifies the requirements for cork floor coverings made from agglomerated composition cork, with or without a decorative surface layer, with or without applied colours, supplied in tile form which are designed to be used with a factory finish and/or an *in situ* finish.

The cork floor decorative surface layer can be made of cork or other bio-based decorative materials, e.g. wood or bamboo veneers, linoleum, leather or natural fibres.

This document includes a classification system based on intensity of use which shows where cork floor tiles with a factory finish can give satisfactory service (see EN ISO 10874). It also specifies requirements for marking, labelling and packing.

## 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 12466, *Resilient floor coverings - Vocabulary*

EN 15468:2016+A1:2021, *Laminate floor coverings - Elements with directly applied printing and resin surface layer - Specifications, requirements and test methods*

EN ISO 4918, *Resilient, textile and laminate floor coverings - Castor chair test (ISO 4918)*

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

EN ISO 16581, *Resilient and laminate floor coverings - Determination of the effect of simulated movement of a furniture leg (ISO 16581)*

EN ISO 23997, *Resilient floor coverings - Determination of mass per unit area (ISO 23997)*

EN ISO 23999, *Resilient floor coverings - Determination of dimensional stability and curling after exposure to heat (ISO 23999)*

EN ISO 24342, *Resilient and textile floor-coverings - Determination of side length, edge straightness and squareness of tiles (ISO 24342)*

EN ISO 24343-1, *Resilient and laminate floor coverings - Determination of indentation and residual indentation - Part 1: Residual indentation (ISO 24343-1)*

EN ISO 24346, *Resilient floor coverings - Determination of overall thickness (ISO 24346)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12466 and the following 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****agglomerated composition cork**

product obtained from the agglutination of cork granules with the addition of a binder

**3.2****cork floor covering**

floor covering, the main component of which is agglomerated composition cork, intended to be used with a finish

[SOURCE: EN 12466:1998, 2.1.27]

**4 Requirements****4.1 General requirements**

Cork floor coverings described in this document shall conform to the appropriate general requirements specified in Table 1, when tested in accordance with methods given therein.

**Table 1 — General requirements**

Property	Requirements	Test method
<b>Side length</b> mm <b>Squareness and straightness of edges</b> mm for side length ≤ 400 mm > 400 mm	deviation from nominal: ≤ 0,2 % up to 1,0 mm maximum ≤ 0,5 ≤ 1,0	EN ISO 24342
<b>Overall thickness</b> mm Average of the overall thickness Individual results of the overall thickness	nominal value − 0,10 + 0,15 average value ±0,15	EN ISO 24346
<b>Apparent density</b> kg/m <sup>3</sup> Average Individual results	≥ nominal value ≥ 95 % nominal value	EN ISO 23997
<b>Dimensional stability</b> <sup>a</sup> %	≤ 0,30	EN ISO 23999
<b>Curling</b> <sup>a</sup> mm	≤  4	EN ISO 23999
<sup>a</sup> Allow the test specimens to recondition for 7 days (±0,5 d) after exposure to heat and before measuring the final values.		

**4.2 Classification requirements**

Cork floor coverings described in this document shall be classified as suitable for different levels of intensity of use in accordance with the performance requirements specified in Table 2, when tested in accordance with the test methods stated therein.

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Classification shall conform to the system specified in EN ISO 10874.

**Table 2 — Classification requirements for cork floor coverings with a factory finish**

Class	Level of use	Overall thickness mm	Apparent density <sup>a</sup> kg/m <sup>3</sup>	Residual indentation mm	Effect of a castor chair	Simulated movement of a furniture leg	Wear resistance <sup>a</sup>
21	Domestic Moderate	≥ 3,2	≥ 400	≤ 0,4	No requirement	No requirement	No requirement
22	Domestic General	≥ 4,0	≥ 450	≤ 0,4			500
23	Domestic Heavy	≥ 4,0	≥ 450	≤ 0,4			1 000
31	Commercial Moderate	≥ 4,0	≥ 450	≤ 0,4	No disturbance to the surface other than slight change in appearance and no delamination shall occur after 10 000 cycles	No damage shall be visible after testing with type 2 foot	2 500
32	Commercial General	≥ 4,0	≥ 500	≤ 0,3			3 500
33	Commercial Heavy	≥ 4,0	≥ 500	≤ 0,3	No disturbance to the surface other than slight change in appearance and no delamination shall occur after 25 000 cycles		5 000
34	Commercial Very Heavy	≥ 4,0	≥ 500	≤ 0,3			7 000
41	Light industrial Moderate	≥ 4,0	≥ 500	≤ 0,3			7 000
Reference test method	EN ISO 10874	EN ISO 24346	EN ISO 23997	EN ISO 24343-1	EN ISO 4918	EN ISO 16581	EN 15468:2016+A1:2021, Annex A

<sup>a</sup> Not applicable for sanded, oil or wax factory finish.



## 5 Marking, labelling and packing

Cork floor coverings that conform to the requirements of this document shall be clearly marked by the manufacturer either in their package or on a label with the following information:

- a) number and the year of this document, i.e. EN 12104:2023;
- b) manufacturer's and/or or supplier's identification;
- c) product name including the finishing and batch number (possibly in code form);
- d) class/symbol of level of use;
- e) nominal dimensions and the area in square metres contained in a package;
- f) the warning that packages shall be stored shielded from direct sunlight and humidity.

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## **Annex A** (informative)

### **Optional properties**

Where the following properties are required for specific applications, the floor covering should be tested in accordance with the appropriate methods:

- Effect of stains, EN 438-2: Group 1 for 10 min only, Group 2 and Group 3 as mentioned in the standard;
- Micro-Scratch Resistance, EN 16094;
- Electrical resistance, EN 1081;
- Thermal conductivity / Thermal resistance, EN 12667;
- Impact Sound Insulation, EN ISO 10140-3:2021.

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