
**Resilient floor coverings —
Specification for floor panels/
assembly for loose laying**

*Revêtements de sol résilients — Spécifications des panneaux de
plancher/assemblages pour pose flottante*

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Requirements	3
4.1 Requirements for the floor panels.....	3
4.2 General requirements for the surface layer.....	3
4.2.1 Residual indentation.....	3
4.2.2 Colour fastness to artificial light.....	4
4.2.3 Hardness of a rubber surface layer.....	4
5 Classification	4
5.1 General classification requirements.....	4
5.2 Classification requirements for the surface layer.....	5
5.2.1 General.....	5
5.2.2 Linoleum surface layer.....	5
5.2.3 Rubber surface layer.....	5
5.2.4 Polyvinyl chloride surface layer.....	5
5.2.5 Polyvinyl chloride with enhanced slip properties surface layer.....	5
5.2.6 Synthetic thermoplastic polymer surface layer.....	5
5.2.7 Cork surface layer.....	6
5.2.8 Heterogeneous polyurethane surface layer.....	6
6 Marking, labelling and packaging	6
6.1 Marking and labelling.....	6
6.2 Packaging.....	6
Annex A (normative) Determination of flatness	7
Annex B (normative) Determination of openings and height differences between floor panels	10
Annex C (normative) Determination of dimensional variations caused by changes in humidity	12
Annex D (normative) Determination of locking strength with a tensile testing machine	14
Annex E (normative) Test report	16
Annex F (informative) Optional properties	17
Bibliography	18

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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 219, *Floor coverings*.

Resilient floor coverings — Specification for floor panels/assembly for loose laying

1 Scope

This document specifies requirements and test methods for floor panels/assembly for domestic and commercial levels of use, which have surface layers consisting of resilient floor covering.

This document is not applicable to heterogeneous polyvinyl chloride floor panels/assembly for floating installation covered by ISO 10582 or to floor panels/assembly that are subject to frequent wetting, such as bathrooms, laundry rooms and saunas.

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 4918, *Resilient, textile and laminate floor coverings — Castor chair test*

ISO 10581, *Resilient floor coverings — Homogeneous poly(vinyl chloride) floor covering — Specifications*

ISO 10582, *Resilient floor coverings — Heterogeneous polyvinyl chloride floor coverings — Specification*

ISO 10874, *Resilient, textile and laminate floor coverings — Classification*

ISO 10577, *Resilient floor coverings — Specification for rubber sheet floor coverings without backing.*

ISO 16581, *Resilient and laminate floor coverings — Determination of the effect of simulated movement of a furniture leg*

ISO 16905, *Resilient floor coverings — Specification for rubber floor covering — Tile/Plank*

ISO 19322, *Resilient floor coverings — Specification for floor coverings based on thermoplastic polymers*

ISO 24011, *Resilient floor coverings — Specification for plain and decorative linoleum*

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*

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

ISO 24346, *Resilient floor coverings — Determination of overall thickness*

ISO 26986, *Resilient floor coverings — Expanded (cushioned) poly(vinyl chloride) floor covering — Specification*

EN 651, *Resilient floor coverings — Polyvinyl chloride floor coverings with foam layer — Specification*

EN 652, *Resilient floor coverings — Polyvinyl chloride floor coverings with cork-based backing — Specification*

EN 655, *Resilient floor coverings — Tiles of agglomerated composition cork with polyvinyl chloride wear layer — Specification*

EN 12104, *Resilient floor coverings — Cork floor tiles — Specification*

EN 13845, *Resilient floor coverings — Polyvinyl chloride floor coverings with particle based enhanced slip resistance — Specification*

EN 14565, *Resilient floor coverings — Floor coverings based upon synthetic thermoplastic polymers — Specification*

EN 16776, *Resilient floor coverings — Heterogeneous polyurethane floor coverings — Specification*

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

3 Terms and definitions

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

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

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

3.1 floor panel

product generally of rectangular form consisting of a compact layer of a substrate and a surface layer of a resilient floor covering

Note 1 to entry: A backing might be included.

3.2 substrate

core material of the floor panel with profiled edges to facilitate assembly at installation

Note 1 to entry: Examples are Medium Density Fibreboard (MDF), High Density Fibreboard (HDF) and Wood Plastic Composite (WPC) either with or without wood fiber.

3.3 surface layer

upper decorative layer(s) of one of the following resilient floor coverings, bonded to the substrate directly or as total product and intended to be on the visible side when the floor is installed:

- linoleum floor covering (ISO 24011);
- rubber floor covering (ISO 10577 and ISO 16905);
- polyvinyl chloride floor covering (ISO 10581, ISO 10582, EN 651, EN 652 and ISO 26986);
- cork floor covering (EN 12104 and EN 655);
- synthetic thermoplastic polymer floor covering (EN 14565 and ISO 19322);
- polyvinyl chloride floor coverings with particle based enhanced slip resistance (EN 13845);
- heterogeneous polyurethane floor covering (EN 16776)

3.4 backing

layer beneath the surface layer on the back of the substrate, e.g. cork, impregnated paper, foam

4 Requirements

4.1 Requirements for the floor panels

All classes of floor panels including the surface layer shall conform to the requirements specified in [Table 1](#) when tested in accordance with the specified test methods.

Table 1 — General requirements for the floor panels

Property	Requirement	Test method
Dimensions measured at the surface layer	Maximum deviation from the nominal	
Square panels		
Side length %	$\pm 0,10$	ISO 24342
Rectangular panels		
Width %	$\pm 0,10$	
Length mm	$\leq 0,5$	
Overall thickness		
Average mm	Nominal $\pm 0,25$	ISO 24346
Individual values mm	Maximum deviation from the average $\pm 0,30$	
Squareness mm	$\leq 0,20$	ISO 24342
Straightness measured at the surface layer mm	$\leq 0,30$	ISO 24342 ^a
Flatness of the panel		
Length		
Concave/convex % of the length	$\leq 0,50/\leq 1,0$	Annex A
Width		
Concave/convex % of the width	$\leq 0,10/\leq 0,15$	
Openings between panels		
Average mm	$\leq 0,15$	Annex B
Individual values mm	$\leq 0,20$	
Height difference between panels		
Average mm	$\leq 0,10$	Annex B
Individual values mm	$\leq 0,15$	
Dimensional variation caused by changes in atmospheric humidity %	$\leq 0,25$	Annex C
^a For length >0,5 m, a metal ruler may be used.		

4.2 General requirements for the surface layer

All classes of floor panels shall conform to the appropriate requirements as specified below.

4.2.1 Residual indentation

Surface layers in accordance with ISO 24011, ISO 10581, ISO 10582, EN 13845, EN 14565 and EN 16776 shall conform to the respectively residual indentation requirements in these particular standards.

NOTE The residual indentation requirements for EN 651, EN 652, EN 655, EN 12104, ISO 19322 and ISO 26986 are related to the surface or wear layer thickness classes in that same standard, and are specified in [5.2](#).