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

*Revêtements de sol résilients — Revêtements de sol homogènes en
poly(chlorure de vinyle) — Spécifications*

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 219, *Floor coverings*.

This second edition cancels and replaces the first edition (ISO 10581:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

- Class 22+ was eliminated in [Table 3](#);
- the Level of use descriptions in [Table 3](#) were revised for Classes 21 and 22.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Resilient floor coverings — Homogeneous poly(vinyl chloride) floor covering — Specifications

1 Scope

This document specifies the characteristics of homogeneous floor coverings, based on poly(vinyl chloride), supplied in either tile or roll form. Products can contain a transparent, non-PVC factory finish.

To encourage the consumer to make an informed choice, this document also includes a classification system (see ISO 10874) based on intensity of use, which shows where these floor coverings give satisfactory service. It also specifies requirements for marking.

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 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

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

ISO 16906, *Resilient floor coverings — Determination of seam strength*

ISO 23997, *Resilient floor coverings — Determination of mass per unit area*

ISO 23999, *Resilient floor coverings — Determination of dimensional stability and curling after exposure to heat*

ISO 24341, *Resilient and textile floor coverings — Determination of length, width and straightness of sheet*

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

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

ISO 24344, *Resilient floor coverings — Determination of flexibility and deflection*

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

ASTM F 1515, *Standard test method for measuring light stability of resilient flooring by color change*

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:

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

3.1 poly(vinyl chloride) floor covering

floor covering with surface layers which are produced using poly(vinyl chloride) as binder

3.2 homogeneous floor covering

floor covering with one or more layers of the same composition and colour, patterned throughout its thickness

3.3 factory finish

transparent coating applied during manufacture

Note 1 to entry: The factory finish is usually not thicker than 0,03 mm.

Note 2 to entry: This coating should not be counted as part of the wear layer.

3.4 binder content

portion of the flooring composition, consisting of poly(vinyl chloride) (PVC) resin, plasticizers and stabilizers

Note 1 to entry: Binder content is expressed as a percentage mass fraction of the total composition.

4 Requirements

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4.1 Identification requirements (standards.iteh.ai)

Products described in this document shall be identified by binder content by weight as shown in [Table 1](#).

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Table 1 — Identification requirements

Type	Minimum binder content %	Maximum binder content %
I	>55	—
II	35	55
III	25	<35

4.2 General requirements

Floor coverings described in this document shall conform to the appropriate general requirements specified in [Table 2](#) when tested in accordance with the methods given therein. [Annex A](#) provides additional optional test methods.

Table 2 — General minimum requirements

Characteristic	Unit	Requirement	Test method
Roll form:		Not less than the nominal values	ISO 24341
Length	m		
Width	m		



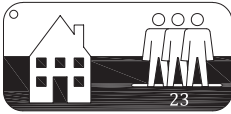
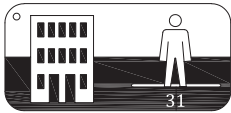
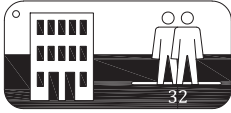
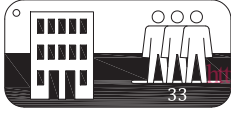
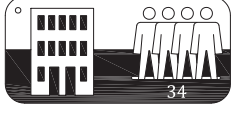
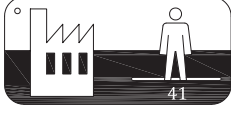
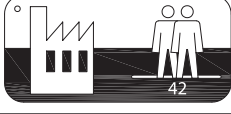
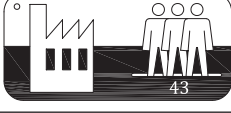
Table 2 (continued)

Characteristic	Unit	Requirement	Test method
Tiles:			ISO 24342
Side length	mm	Deviation $\leq 0,13$ % of nominal length up to 0,5 mm maximum	
Squareness and straightness for side length		Deviation allowed at any point	
≤ 400 mm	mm	$\leq 0,25$	
> 400 mm	mm	$\leq 0,35$	
> 400 mm (intended for heat welding)	mm	$\leq 0,50$	
Overall thickness:			ISO 24346
Average	mm	Nominal value +0,15 -0,10	
Individual results	mm	Shall not be more than $\pm 0,15$ from the average value.	
Mass per unit area			ISO 23997
Average	g/m ²	Nominal value - 10 % to +13 %	
Residual indentation (average)	mm	$\leq 0,1$	ISO 24343-1
Dimensional stability after exposure to heat:			ISO 23999
Sheets and tiles intended for welding		$\leq 0,40$ %	
Tiles (intended for dry-joint laying)		$\leq 0,25$ %	
Flexibility		20 mm mandrel, no cracking For products which show signs of cracking, perform a further test using a 40 mm mandrel. If results show no further cracking, record the use of a 40 mm mandrel.	ISO 24344, Method A
Effect of castor chair		After 25 000 cycles, no delamination shall occur. No disturbance to the surface other than slight change in appearance.	ISO 4918
Colour fastness to artificial light		6 minimum Or $\Delta E \leq 8$ after 300 h	ISO 105-B02, Method 3 ASTM F 1515

5 Classification

The classification scheme for resilient floor coverings is described in ISO 10874. Homogeneous poly(vinyl chloride) floor covering in accordance with this scheme shall be as specified in [Table 3](#).

Table 3 — Classification minimum requirements for level of use

Class	Symbol	Level of use	Overall thickness, nominal value mm			Seam strength N/50 mm
			Type I	Type II	Type III	
Domestic						
21		Moderate	1,0	1,0	1,0	No requirement.
22		General	1,5	1,5	1,5	
23		Heavy	1,5	1,5	1,5	
Commercial						
31		Moderate	1,5	1,5	1,5	When welded in accordance with the manufacturer's instructions: Average value ≥ 240.
32		General	1,5	1,5	2,0	
33		Heavy	2,0	2,0	2,0	
34		Very heavy	2,0	2,0	2,5	
Light industrial						
41		Moderate	1,5	1,5	2,0	Individual values ≥ 180.
42		General	2,0	2,0	2,0	
43		Heavy	2,0	2,0	2,5	
Test method			ISO 24346	ISO 24346	ISO 24346	ISO 16906

6 Marking, labelling and packaging

Floor coverings covered by this document and/or their packaging shall bear the following marking:

- a) number and date of this document, i.e. ISO 10581:—;
- b) manufacturer or supplier identification;

- c) product name;
- d) colour/pattern, batch number and, if applicable, roll number;
- e) classes/symbols appropriate for the product;
- f) for rolls: the length, width and thickness; and
- g) for tiles: the dimensions of a tile and the area in square metres contained in the package.

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