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

*Revêtements de sol résilients — Revêtements de sol hétérogènes 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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://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 10582:2010), which has been technically revised.

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

# Resilient floor coverings — Heterogeneous poly(vinyl chloride) floor covering — Specifications

## 1 Scope

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

To encourage the consumer to make an informed choice, this document includes a classification system (see ISO 10874) based on the 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, *Textile floor coverings — Determination of wear — 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 24340, *Resilient floor coverings — Determination of thickness of layers*

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 F1515, *Standard test method for measuring light stability of resilient flooring by colour change*

EN 1372, *Adhesives — Test method for adhesives for floor and wall coverings — Peel test*

## 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 <http://www.iso.org/obp>

**3.1 heterogeneous floor covering**  
floor covering consisting of a wear layer and other layers which differ in composition and/or design and can contain a reinforcement

**3.2 poly(vinyl chloride) floor coverings**  
floor covering with all layers produced using poly(vinyl chloride) as base resin

**3.3 wear layer**  
portion of a resilient floor covering that contains or protects the pattern and design exclusive of factory finishes or maintenance coatings

**3.4 factory finish**  
transparent coating applied during the manufacture, usually not thicker than 0,03 mm not using poly(vinyl chloride) as base resin

**3.5 binder content**  
portion of the flooring composition, consisting of poly(vinyl chloride) (PVC), plasticizers and stabilizers

Note 1 to entry: Binder content can be expressed as a percentage mass fraction of the considered layer when requested.

**3.6 plank**  
tile with a ratio length divided by width superior or equal to 1,3

## 4 Requirements

### 4.1 Identification requirements

Products described in this document shall be identified by binder content by mass in the wear layer as shown in [Table 1](#). The binder content is determined by statement of formula (Manufacturer Certificate of Compliance).

**Table 1 — Identification requirements**

| Type | Minimum wear layer binder content |
|------|-----------------------------------|
| I    | 80 %                              |
| II   | 30 %                              |

### 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.

NOTE For optional properties, see [Annex A](#).

Table 2 — General requirements

| Characteristic                                                                       | Requirement                                                                                                                                                                                                                                                                                                                                                                   | Test method               |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>Roll form:</b>                                                                    |                                                                                                                                                                                                                                                                                                                                                                               |                           |
| Length [m]                                                                           | Not less than nominal values                                                                                                                                                                                                                                                                                                                                                  | ISO 24341                 |
| Width [mm]                                                                           |                                                                                                                                                                                                                                                                                                                                                                               |                           |
| <b>Tiles/Planks:</b>                                                                 |                                                                                                                                                                                                                                                                                                                                                                               |                           |
| Side length _____                                                                    | ___ Deviation $\leq 0,15$ % of nominal length up to 0,5 mm maximum <sup>a</sup> . This requirement has to be applied when considering square panel.                                                                                                                                                                                                                           | ISO 24342 <sup>b</sup>    |
| Width _____                                                                          | ___ Deviation $\leq 0,10$ % up to 0,5 mm maximum <sup>a</sup>                                                                                                                                                                                                                                                                                                                 |                           |
| squareness and straightness                                                          | Deviation allowed at any point <sup>a</sup>                                                                                                                                                                                                                                                                                                                                   |                           |
| $\leq 400$ mm _____                                                                  | $\leq 0,25$ mm                                                                                                                                                                                                                                                                                                                                                                |                           |
| $> 400$ mm _____                                                                     | $\leq 0,35$ mm                                                                                                                                                                                                                                                                                                                                                                |                           |
| $> 400$ mm (intended for heat welding) _____                                         | $\leq 0,50$ mm                                                                                                                                                                                                                                                                                                                                                                |                           |
| <b>Overall thickness and wear layer thickness:</b>                                   |                                                                                                                                                                                                                                                                                                                                                                               |                           |
| Average of the overall thickness _____                                               | _____ Nominal value + 0,13 mm<br>- 0,10 mm                                                                                                                                                                                                                                                                                                                                    | ISO 24346                 |
| Individual results of the overall thickness _____                                    | _____ Average value $\pm 0,15$ mm                                                                                                                                                                                                                                                                                                                                             | ISO 24346                 |
| Average of the wear layer thickness _____                                            | _____ Nominal value + 13 %<br>- 10 %                                                                                                                                                                                                                                                                                                                                          | ISO 24340                 |
| Individual results of the wear layer thickness                                       | and shall not exceed $\pm 0,1$ mm.<br>Individual results shall not differ as follows with regard to the mean value: no more than 0,05 mm or 15 % below the mean value, whichever is greater. Where this requirement is not met by only one individual value, a new single value has to be measured. If it still does not meet the requirement, the test result does not pass. | ISO 24340                 |
| <b>Total mass per unit area (average) – [g/m<sup>2</sup>]</b>                        | Nominal value + 13 %<br>- 10 %                                                                                                                                                                                                                                                                                                                                                | ISO 23997                 |
| <b>Dimensional stability after exposure to heat:</b>                                 |                                                                                                                                                                                                                                                                                                                                                                               |                           |
| Sheets and tiles intended for welding and glued installation. _____                  | _____ $\leq  0,4 $ %                                                                                                                                                                                                                                                                                                                                                          | ISO 23999 <sup>e</sup>    |
| Tiles/planks intended for dry-joint laying and glued installation <sup>c</sup> _____ | _____ $\leq  0,25 $ %                                                                                                                                                                                                                                                                                                                                                         |                           |
| Tiles/planks intended for loose lay or floating installation <sup>d</sup> _____      | _____ $\leq  0,15 $ %                                                                                                                                                                                                                                                                                                                                                         |                           |
| <b>Curling after exposure to heat:</b>                                               |                                                                                                                                                                                                                                                                                                                                                                               |                           |
| Sheets and tiles (intended for heat welding) and glued installation. _____           | _____ $\leq  8 $ mm                                                                                                                                                                                                                                                                                                                                                           | ISO 23999 <sup>f</sup>    |
| Tiles/planks intended for dry-joint laying and glued installation <sup>c</sup> _____ | _____ $\leq  2 $ mm                                                                                                                                                                                                                                                                                                                                                           |                           |
| Tiles/planks intended for loose lay or floating installation <sup>d</sup> _____      | _____ $\leq  1 $ mm                                                                                                                                                                                                                                                                                                                                                           |                           |
| <b>Flexibility (only for sheet floorings)</b>                                        | Test using a 20 mm mandrel. For products which show signs of cracking, perform a further test using a 50 mm mandrel. If results show no further cracking, record the use of a 50 mm mandrel.                                                                                                                                                                                  | ISO 24344: 2008, Method A |