

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 651:2011

<https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011>

EUROPEAN STANDARD

EN 651

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2011

ICS 97.150

Supersedes EN 651:1996

English Version

Resilient floor coverings - Polyvinyl chloride floor coverings with foam layer - Specification

Revêtements de sol résilients - Revêtements de sol à base de polychlorure de vinyle sur mousse - Spécifications

Elastische Bodenbeläge - Polvinylchlorid-Bodenbeläge mit einer Schaumstoffschicht - Spezifikation

This European Standard was approved by CEN on 6 February 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN 651:2011](https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011)

<https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011>



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Requirements	5
4.1 General requirements.....	5
4.2 Classification requirements.....	5
4.2.1 Wear group classification	5
4.2.2 Homogeneous wear layers	5
4.2.3 Level of use classification	5
5 Marking	10
Annex A (informative) Optional properties	11
Annex B (informative) Additional methods of test.....	12
Bibliography	13

ITeH STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 651:2011](https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011)

<https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011>

Foreword

This document (EN 651:2011) has been prepared by Technical Committee CEN/TC 134 "Floor coverings", the secretariat of which is held by BSI.

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 September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 651:1996.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 651:2011](https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011)

<https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011>

EN 651:2011 (E)**1 Scope**

This European Standard specifies the characteristics of floor coverings based on polyvinyl chloride with polyvinyl chloride foam layer, supplied in either tile or roll form.

To encourage the consumer to make an informed choice, the standard includes a classification system (see EN 685) based on intensity of use, which shows where these floor coverings should give satisfactory service. It also specifies requirements for marking.

2 Normative references

The following referenced documents are indispensable for the application 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 424, *Resilient floor coverings — Determination of the effect of the simulated movement of a furniture leg*
- EN 425, *Resilient and laminate floor coverings — Castor chair test*
- EN 426, *Resilient floor coverings — Determination of width, length, straightness and flatness of sheet material*
- EN 427, *Resilient floor coverings — Determination of the side length, squareness and straightness of tiles*
- EN 428, *Resilient floor coverings — Determination of overall thickness*
- EN 429, *Resilient floor coverings — Determination of the thickness of layers*
- EN 430, *Resilient floor coverings — Determination of mass per unit area*
<https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-8742b48a920a/sist-en-651-2011>
- EN 431, *Resilient floor coverings — Determination of peel resistance*
- EN 433, *Resilient floor coverings — Determination of residual indentation after static loading*
- EN 434, *Resilient floor coverings — Determination of dimensional stability and curling after exposure to heat*
- EN 436, *Resilient floor coverings — Determination of density*
- EN 660-2, *Resilient floor coverings — Determination of wear resistance — Part 2: Frick-Taber test*
- EN 684, *Resilient floor coverings — Determination of seam strength*
- EN 685, *Resilient, textile and laminate floor coverings — Classification*
- EN ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test (ISO 105-B02:1994, including amendment 1:1998)*

3 Terms and definitions

For the purposes of this document, the following term and definition applies.

3.1

polyvinyl chloride floor covering

floor covering with surface layers which are produced using polyvinyl chloride (and modifications thereof) as binder

4 Requirements

4.1 General requirements

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

4.2 Classification requirements

4.2.1 Wear group classification

Polyvinyl chloride floor coverings are classified in the appropriate wear group specified in Table 2, when tested in accordance with EN 660-2.

Floor coverings described in this standard shall be classified in wear group T, P or M.

Floor coverings with a transparent wear layer are *a priori* group T and need not be tested.

4.2.2 Homogeneous wear layers

A wear layer shall retain its wear group classification throughout its thickness if tested.

4.2.3 Level of use classification

Floor coverings described in this standard shall be classified as suitable for different levels of intensity of use in accordance with the performance requirements specified in Table 3, when tested with the methods given therein. Classification shall comply with the scheme specified in EN 685.

EN 651:2011 (E)

Table 1 — General requirements

Characteristic	Requirement	Test method
Roll form: length width	m mm Not less than the nominal values	EN 426
Tiles: side length	mm Deviation $\leq 0,13\%$ of nominal length up to 0,5 mm maximum	EN 427
squareness and straightness for side length: ≤ 400 mm > 400 mm > 400 mm (intended for welding)	mm Deviation allowed at any point $\leq 0,25$ $\leq 0,35$ $\leq 0,50$	
Overall thickness: average individual results	mm Nominal value + 0,18 - 0,15 Average value $\pm 0,20$	EN 428
Thickness of foam layer	mm Nominal thickness shall be stated	EN 429
Total mass per unit area (average)	g/m^2 Nominal value + 13% - 10%	EN 430
Density of the wear layer (average)	kg/m^3 Nominal value $\pm 0,50$	EN 436
Dimensional stability after exposure to heat: sheets and tiles intended for welding tiles intended for dry-joint laying	% $\leq 0,4$ $\leq 0,25$ SIST EN 651:2011	EN 434
Curling after exposure to heat: sheets and tiles intended for welding tiles intended for dry-joint laying	mm ≤ 8 ≤ 2 https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d1e-9743b48a820a/sist-en-651-2011	EN 434
Colour fastness to artificial light	6 minimum	EN ISO 105-B02 Method 3 ^a
Peel resistance average individual results	N/50mm ≥ 50 ≥ 40	EN 431
^a Expose a full size of test specimen. Store a further test specimen in the dark, which will constitute the reference standard for assessment of colour change.		

Table 2 — Classification requirements for wear groups

Characteristic	Requirements for wear group				Test method
	T	P	M	F	
volume loss F_v mm ³	$F_v \leq 2,0^a$	$2,0 < F_v \leq 4,0$	$4,0 < F_v \leq 7,5$	$7,5 < F_v \leq 15,0$	EN 660-2
^a If tested for verification					

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 651:2011](https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011)

<https://standards.iteh.ai/catalog/standards/sist/01387d5a-b7f0-4d10-992b-9743b48a820a/sist-en-651-2011>