



# SLOVENSKI STANDARD

## SIST EN 653:2011

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Nadomešča:  
SIST EN 653:1999

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### Netekstilne talne obloge - Penjene polivinilkloridne talne obloge - Specifikacija

Resilient floor coverings - Expanded (cushioned) polyvinyl chloride floor coverings - Specification

Elastische Bodenbeläge - Geschäumte Polyvinylchlorid-Bodenbeläge - Spezifikation

Revêtements de sol résilients - Revêtements de sol à base de polychlorure de vinyle expansé - Spécifications

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#### **ICS:**

97.150            Netekstilne talne obloge            Non-textile floor coverings

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EUROPEAN STANDARD

**EN 653**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2011

ICS 97.150

Supersedes EN 653:1996

English Version

**Resilient floor coverings - Expanded (cushioned) polyvinyl chloride floor coverings - Specification**

Revêtements de sol résilients - Revêtements de sol à base de polychlorure de vinyle expansé - Spécifications

Elastische Bodenbeläge - Geschäumte Polyvinylchlorid-Bodenbeläge - Spezifikation

This European Standard was approved by CEN on 10 March 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.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 653:2011) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile and laminate 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.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 653:1996.

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.

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**EN 653:2011 (E)****1 Scope**

This European Standard specifies the characteristics of floor coverings based on expanded (cushioned) polyvinyl chloride and modifications thereof, supplied in either tile or roll form.

To encourage the consumer to make an informed choice, the European 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*

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 terms and definitions apply.

**3.1**  
**polyvinyl chloride floor covering**  
 floor covering with surface layers which are produced using polyvinyl chloride (and modifications thereof) as binder

### 3.2

#### **expanded polyvinyl chloride floor covering**

floor covering with a transparent wear layer over a layer of foamed polyvinyl chloride carrying a printed pattern, which can be embossed in register with the printed pattern.

## 4 Requirements

### 4.1 General requirements

Floor coverings described in this European 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

Floor coverings described in this European Standard shall be classified in the appropriate wear group, i.e. group T, P, M or F specified in Table 2, when tested in accordance with EN 660-2. Floor coverings with a transparent wear layer are a priori group T and need not be tested.

#### 4.2.2 Level of use classification

Floor coverings described in this European 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.

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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
squareness and straightness for side length: $\leq 400$ mm $> 400$ mm $> 400$ mm (intended for welding)	mm	Deviation allowed at any point $\leq 0,25$ $\leq 0,35$ $\leq 0,50$
EN 427		
Overall thickness: average	mm	Nominal value + 0,18 - 0,15
individual results		Average value $\pm 0,20$
EN 428		
Total mass per unit area (average)	g/m <sup>2</sup>	Nominal value + 13% - 10%
EN 430		
Density of the wear layer (average)	kg/m <sup>3</sup>	Nominal value $\pm 0,50$
EN 436		
Dimensional stability after exposure to heat:	%	
sheets and tiles intended for welding		$\leq 0,4$
tiles intended for dry-joint laying		$\leq 0,25$
EN 434		
Curling after exposure to heat:	mm	
sheets and tiles (intended for welding)		$\leq 8$
tiles (intended for dry-joint laying)		$\leq 2$
EN 434		
Colour fastness to artificial light		6 minimum
EN ISO 105-B02 Method 3 <sup>1</sup>		
<sup>1</sup> 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 <sup>3</sup>	$F_v \leq 2,0^1$	$2,0 < F_v \leq 4,0$	$4,0 < F_v \leq 7,5$	$7,5 < F_v \leq 15,0$	EN 660-2
<sup>1</sup> If tested for verification					

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