



**SLOVENSKI STANDARD**  
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Textile floor coverings - Classification of needled pile floor coverings

Textile Bodenbeläge - Einstufung von Polvlies-Bodenbelägen

Revetements de sol textiles - Classement des revêtements de sol aiguilletés a velours

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**Ta slovenski standard je istoveten z: EN 13297:2007**

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**ICS:**

59.080.60      Tekstilne talne obloge      Textile floor coverings

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English Version

## Textile floor coverings - Classification of needled pile floor coverings

Revêtements de sol textiles - Classement des revêtements de sol aiguilletés à velours

Textile Bodenbeläge - Einstufung von Polvlies-Bodenbelägen

This European Standard was approved by CEN on 1 March 2007.

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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 Management Centre has the same status as the official versions.

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

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## Contents

Page

Foreword.....	3
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions .....	5
4 Description of categories and levels of use .....	6
5 Identification requirements.....	7
6 Basic requirements.....	8
7 Level of use classification .....	10
7.1 General.....	10
7.2 Classification for wear .....	10
7.2.1 Abrasion resistance - Lisson test .....	10
7.2.2 Hairiness (pilling) - Lisson test .....	11
7.3 General structural integrity.....	12
7.4 Classification for change in appearance.....	12
8 Luxury rating requirements.....	13
9 Performance properties .....	14
10 Report .....	15
11 Symbols .....	16
Annex A (normative) Additional requirements for tiles .....	17
Annex B (normative) Suitability for under-floor heating.....	18
Annex C (normative) Colour change due to soiling subsequent to spilled water .....	19
Annex D (normative) Summary test report.....	20
Annex E (normative) Criteria for the assessment of stair suitability.....	25
Bibliography .....	26

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SIST EN 13297:2007

<https://standards.iteh.ai/catalog/standards/sist/d11599ac-c956-47c6-aa25-01523680240/sist-en-13297-2007>

## Foreword

This document (EN 13297:2007) 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 April 2008, and conflicting national standards shall be withdrawn at the latest by April 2008.

This document supersedes EN 13297:2000.

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, 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.

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## 1 Scope

This European Standard describes and specifies needled pile floor coverings in sheet form including use classification according to wear and appearance retention.

This European Standard is also applicable to tiles, the additional requirements for which are given in Annex A.

## 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 984, *Textile floor coverings — Determination of the mass per unit area of the use surface of needled floor coverings*

EN 985:2001, *Textile floor coverings — Castor chair test*

EN 986:2005, *Textile floor coverings — Tiles — Determination of dimensional changes due to the effects of varied water and heat conditions and distortion out of plane*

EN 994, *Textile floor coverings — Determination of the side length, squareness and straightness of tiles*

EN 995, *Textile floor coverings — Assessment of the creep of the backings*

EN 1269, *Textile floor coverings — Assessment of impregnations in needled floorcoverings by means of a soiling test*

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EN 1318, *Textile floor coverings — Determination of the apparent effective thickness of the backing*

EN 1471, *Textile floor coverings — Assessment of changes in appearance*

EN 1814, *Textile floor coverings — Determination of resistance to damage at cut edges using the modified Vettermann drum test*

EN 1963, *Textile floor coverings — Tests using the Lisson Tretrad Machine*

EN 14041, *Resilient, textile and laminate floor coverings — Essential characteristics*

CEN/TS 14159, *Textile floor coverings — Requirements for tolerances on (linear) dimensions of rugs, runners, carpet tiles and wall-to-wall carpet and for tolerances on pattern repeat*

EN 15115, *Textile floor coverings — Determination of sensitivity to spilled water*

EN ISO 105-A01, *Textiles — Tests for colour fastness — Part A01: General principles of testing — (ISO 105-A01:1994)*

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)*

EN ISO 105-E01, *Textiles — Tests for colour fastness — Part E01: Colour fastness to water (ISO 105-E01:1994)*

EN ISO 105-X12, *Textiles — Test for colour fastness — Part X12: Colour fastness to rubbing (ISO 105-X12:2001)*

EN ISO 140-8, *Acoustics — Measurement of sound insulation in buildings and of buildings elements — Part 8: Laboratory measurements of the reduction of transmitted impact noise by floor coverings on a heavyweight standard floor (ISO 140-8:1997)*

EN ISO 354, *Acoustics - Measurement of sound absorption in a reverberation room (ISO 354:2003)*

EN ISO 717-2, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 2: Impact sound insulation (ISO 717-2:1996)*

EN ISO 845, *Cellular plastics and rubbers — Determination of apparent (bulk) density (ISO 845:1988)*

EN ISO 11378-2, *Textile floor coverings — Laboratory soiling tests — Part 2: Drum test (ISO 11378-2:2001)*

ISO 1765, *Machine-made textile floor coverings — Determination of thickness*

ISO 1766, *Textile floor coverings — Determination of thickness of pile above the substrate*

ISO 2424:1992, *Textile floor coverings — Vocabulary*

ISO 2551, *Machine-made textile floor coverings — Determination of dimensional changes due to the effects of varied water and heat conditions*

ISO 6356, *Textile floor coverings — Assessment of static electrical propensity — Walking test*

ISO 8302, *Thermal insulation — Determination of steady-state thermal resistance and related properties — Guarded hot plate apparatus*

ISO 8543, *Textile floor coverings — Methods for determination of mass*

ISO 10361, *Textile floor coverings — Production of changes in appearance by means of Vettermann drum and hexapod tumbler testers*

ISO 10965, *Textile floor coverings — Determination of electrical resistance*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2424:1992 and the following apply.

#### 3.1

##### **non adhered tile (loose laid)**

tile installed without any use of a bonding system (see Annex A)

#### 3.2

##### **adhered removable tile**

tile installed with a bonding system allowing easy removal and reinstallation (see Annex A)

#### 3.3

##### **permanent adhered tile**

tile installed with a permanent bonding system (see Annex A)

**3.4  
nominal value**

value stated by the manufacturer

**4 Description of categories and levels of use**

**4.1 Needed pile floor coverings categories**

Needed pile floor coverings shall be distributed in three categories:

**Type 1:**

Textile floor covering with needed pile.

Floor covering in which the use-surface is composed of entangled fibres bonded together by a mechanical and a chemical process.

The mechanical bonding system is a consolidation of a batt of fibres through entanglement by multiple penetration of barbed needles in one or more (visible) layers.

Needles are being used in special machines for structuring these pre-needed felting material.

The use surface is either a geometric or linear design, a velour or a rib pattern.

Any bonding system can be used.

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**Type 2:**

Hairy needed floor covering.

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Floor covering in which the use-surface is composed of entangled fibres bonded together by a mechanical and a chemical process.

The mechanical bonding system is a consolidation of a batt of fibres through entanglement by multiple penetration of barbed needles in one or more (visible) layers.

Mechanically brushing machine are being used for structuring these pre-needed felting material, resulting in a roughened surface with in general relatively long and coarse protruding fibres.

The bonding system is on the backside.

**Type 3:**

Floor covering in which the use-surface is composed of fibre spheres bonded together by a mechanical and a chemical process. The chemical bonding system is on the back.

**4.2 Levels of use**

Needed pile floor coverings are classified as suitable for different levels of use in accordance with the performance requirements specified in Clause 7.

The different levels of use are described in Table 1.



Table 1 — Levels of use

Use intensity	
<b>Domestic</b>	
21	Moderate / light
22	General / medium
22+	General
23	Heavy
<b>Commercial <sup>a</sup></b>	
31	Moderate
32	General
33	Heavy
<sup>a</sup> Class 33 should be used as the basis to which additional requirements are added to provide an individual full specification.	

If symbols are to be used for the use classes, luxury rating classes and additional characteristics, the symbols listed in CEN/TS 15398 shall be used which can also be found on [www.floorsymbols.com](http://www.floorsymbols.com).

For very specific use such as airports, theatres or industrial use, the technical requirements should be discussed and agreed between all parties involved.

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### 5 Identification requirements [standards.iteh.ai](http://standards.iteh.ai)

This clause specifies the characteristics for identification of the product and requirements for tolerances for the identifying properties.

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The manufacturer shall provide the following information in accordance with the definitions in ISO 2424:

- commercial references,
- type of bonding,
- type of backing

and shall declare the values of the characteristics in Table 2.

Table 2 — Characteristic values

Characteristics	Test methods	Tolerances
<b>Fibre composition of use surface</b>	<sup>a</sup>	—
Dimensions	CEN/TS 14159	CEN/TS 14159
Total thickness mm	ISO 1765	—
Thickness of pile above the substrate mm (for type 2 and type 3 product)	ISO 1766	Nominal + 15 % - 10 %
Total mass per unit area g/m <sup>2</sup>	ISO 8543	Nominal + 15 % - 7,5 %
Mass per unit area of the use-surface g/m <sup>2</sup> (for type 2 and type 3 product)	EN 984	Nominal + 15 % - 10 %
Foam backing – if applicable		
• Apparent thickness mm	EN 1318	Nominal ± 0,5 mm
• Apparent density g/cm <sup>3</sup>	EN ISO 845	
<sup>a</sup> Attention is drawn to the European Directives 96/73 and 96/74 which cover the fibre composition and are reflected in the national regulations		

## 6 Basic requirements

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Needed pile floor coverings shall conform to the basic requirements specified in Table 3.

Table 3 — Basic requirements

Characteristics	Requirements	Test methods
Dimensional stability <sup>a</sup>	shrinkage ≤ 1,2 % in either direction  extension ≤ 0,5 % in either direction	ISO 2551
Colour fastness to <sup>b</sup> Light - General - Pastel shade <sup>c</sup>	≥ 5 ≥ 4	EN ISO 105-B02
Rubbing - Wet - Dry	≥ 3 ≥ 3-4	EN ISO 105-X12
Water (change in colour) - Plain floor coverings - Other floor coverings	≥ 3-4 ≥ 4	EN ISO 105-E01
Water (staining) <sup>d</sup> - All carpets	≥ 2-3	
Hairiness (pilling) <sup>e f</sup>	≥ 2,5	EN 1963 - Test D
Colour change <sup>g</sup> - due to spilled water - due to soiling subsequent to spilled water	≥ 4 ≥ 3	EN 15115 and  Annex C
<p><sup>a</sup> Not applicable for tiles (see Annex A).</p> <p><sup>b</sup> Conformity to be declared by the manufacturer for each colour.</p> <p><sup>c</sup> Pastel shade: colour corresponding to a standard depth ≤ 1/12 in accordance with EN ISO 105-A01.</p> <p><sup>d</sup> On multifibre: worst result.</p> <p><sup>e</sup> Tested production-wise and cross-wise, worst result decisive.</p> <p><sup>f</sup> Only for type 1 product.</p> <p><sup>g</sup> Conformity to be declared by manufacturer.</p>		