BS EN 655:2011

BSI Standards Publication

Resilient floor coverings — Tiles of agglomerated composition cork with polyvinyl chloride wear layer — Specification

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee PRI/60, Resilient floor coverings.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Resilient floor coverings - Tiles of agglomerated composition cork with polyvinyl chloride wear layer - Specification

Revêtements de sol résilients - Dalles d'aggloméré de liège avec couche d'usure à base de polychlorure de vinyle - Spécifications

Elastische Bodenbeläge - Platten auf einem Rücken aus Presskork mit einer Polyvinylchlorid-Nutzschicht - Spezifikation

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Foreword

This document (EN 655:2011) 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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1 Scope

This European Standard specifies the characteristics of agglomerated cork with a wear layer based on polyvinyl chloride and modifications thereof.

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 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*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

3.2
agglomerated composition cork with polyvinyl chloride wear layer
floor coverings whose main component is agglomerated cork and whose wear layer is a homogeneous polyvinyl chloride layer

NOTE Decorative materials, e.g. decorative cork or wood veneers, can be incorporated under the wear layer.

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 shall be classified in the appropriate wear group specified in Table 2, when tested in accordance with EN 660-2.

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

Table 1 — General requirements

Characteristic	Requirement	Test method
Side length of tiles mm squareness and straightness for side length: mm ≤ 400 mm > 400 mm	Deviation ≤ 0,13% of nominal length up to 0,5 mm maximum Deviation allowed at any point ≤ 0,25 ≤ 0,35	EN 427
Overall thickness: mm average individual results	 Nominal value + 0,18 - 0,15 Average value ± 0,20	EN 428
Thickness of agglomerated composition cork base mm	Nominal thickness shall be stated	EN 429
Thickness of polyvinylchloride backing (average) mm	Nominal value ± 10%	
Total mass per unit area g/m² (average)	Nominal value + 13% - 10%	EN 430
Density of wear layer (average) kg/m³	Nominal value ± 50	EN 436
Dimensional stability after exposure to heat[1] %	≤ 0,40 after reconditioning for 7 days after test	EN 434
Curling on exposure to heat mm	≤ 6 after reconditioning for 7 days after test	
Peel resistance[2] N/50mm average individual values	 ≥ 35 ≥ 25	EN 431
[1] This test is not applicable when the decorative layer is wood veneer [2] The separation shall lie within the agglomerated cork line		

Table 2 — Classification requirements for wear groups

Characteristic	Requirements for wear group				Test method
	T	P	M	F	
volume loss *Fv* mm³	*Fv* ≤ 2,0[1]	2,0 < *Fv* ≤ 4,0	4,0 < *Fv* ≤ 7,5	7,5 < *Fv* ≤ 15,0	EN 660-2
[1] If tested for verification					

Table 3 — Classification requirements for level of use

Class	Symbol	Level of use	Overall thickness Nominal value[1], mm	Thickness of wear layer Nominal value[2], mm Wear group T	Effect of a castor chair	Simulated movement of a furniture leg		Seam strength when welded in accordance with manufacturer's instructions N/50 mm	Residual indentation after static loading, average, mm
21		domestic moderate	2,0	0,15	No requirement	-	No requirement	No requirement	
22		domestic general		0,20		No damage shall be visible after testing with a type 3 foot			
22+		domestic general							
23		domestic heavy	2,5	0,25				Average ≥ 150	
31		commercial moderate						Individual values ≥ 120	

32		commercial general		0,35	No disturbance to the surface other than slight change in appearance and no delamination shall occur	No damage shall be visible after testing with a type 2 foot	When welded in accordance with manufacturer's instructions: no damage shall be visible to the seams, when tested with a type 0 foot		≤ 0,20
41		light industrial moderate							
33		commercial heavy	3,0	0,50					
42		light industrial general							
34		commercial very heavy		0,65					
Test method			EN 428	EN 429	EN 425	EN 424		EN 684	EN 433

[1] The average value shall be the nominal value + 0,18 mm. No individual value shall vary more than ± 0,20 mm from the average value. - 0,15 mm

[2] The average value shall be the nominal value with a tolerance of + 13 % but no more than 0,1 mm.

- 10 %

Individual values shall not vary more than 0,05 mm or 15 % below the average, whichever is the greater. Where this requirement is not met only one individual value, however, the test shall be repeated once more.

5 Marking

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

a) number and date of this European Standard, i.e. EN 655:2011;

b) manufacturer's or supplier's identification;

c) product name;

d) colour/pattern and batch number;

e) classes/symbols appropriate for the product;

f) length, width and thickness;

g) area in square metres contained in a package.

Annex A
(informative)

Optional properties

Where the following properties are required for specific applications, the floor covering should be tested in accordance with the appropriate methods:

— electrical resistance (see EN 1081);

— electrostatic propensity (see EN 1815);

— effect of stains (see EN 423).

Annex B
(informative)

Additional methods of test

The following test methods are also available for this type of product but do not form part of the specification:

— shear force (EN 432);

— curling on exposure to moisture (EN 662);

— volatile loss (EN 664);

— exudation of plasticizers (EN 665);

— gelling (EN 666);

— mass/unit area of a reinforcement or backing (EN 718).

Bibliography

[1] EN 423, *Resilient floor coverings — Determination of resistance to staining*

[2] EN 432, *Resilient floor coverings — Determination of shear force*

[3] EN 662, *Resilient floor coverings — Determination of curling on exposure to moisture*

[4] EN 664, *Resilient floor coverings — Determination of volatile loss*

[5] EN 665, *Resilient floor coverings — Determination of exudation of plasticizers*

[6] EN 666, *Resilient floor coverings — Determination of gelling*

[7] EN 718, *Resilient floor coverings — Determination of mass per unit area of a reinforcement or a backing of polyvinyl chloride floor coverings*

[8] EN 1081, *Resilient floor coverings — Determination of electrical resistance*

[9] EN 1815, *Resilient and textile floor coverings — Assessment of static electrical propensity*

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