

BS EN 686:2011



BSI Standards Publication

Resilient floor coverings — Specification for plain and decorative linoleum on a foam backing

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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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April 2011

ICS 97.150

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English Version

Resilient floor coverings - Specification for plain and decorative linoleum on a foam backing

Revêtements de sol résilients - Spécifications pour le
linoléum uni et décoratif sur sous-couche de mousse

Elastische Bodenbeläge - Spezifikation für Linoleum mit
und ohne Muster mit Schaumrücken

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Foreword

This document (EN 686:2011) 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.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 plain and decorated linoleum on a foam backing as a compound floor covering, supplied in roll form.

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

The term 'linoleum' is frequently incorrectly applied to a range of floor coverings, often to those based on polyvinyl chloride or rubber. Such materials are not included in this standard.

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 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 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 435, *Resilient floor coverings — Determination of flexibility*

EN 670, *Resilient floor coverings — Identification of linoleum and determination of cement content and ash residue*

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

linoleum cement

binder in linoleum, consisting of a mixture of linseed oil and/or other vegetable drying oils, rosin and drying oil catalysts, which is converted to a semi-elastic mass by an oxidative curing process

3.2

linoleum

product produced by calendaring a homogeneous mixture of linoleum cement, cork and/or wood flour, pigments and inorganic filler onto a fibrous backing; the product is then converted into its final form by an oxidative curing process.

NOTE The only chemical cross-linking bondings in linoleum will be those which are formed during the oxidation process.

3.3

linoleum on a foam backing

product formed by laminating linoleum on to a foam layer

4 Identification

Linoleum shall be identified by its ability to be disintegrated in 0,5 mol/l potassium hydroxide/methanol solution and by the determination of cement content and ash residue.

The minimum amount of linoleum cement shall be 30 % when tested in accordance with EN 670.

The maximum amount of inorganic filler (ash residue) shall be 50 % when tested in accordance with EN 670.

5 Requirements

5.1 General requirements

All classes of linoleum on foam backing shall comply with the appropriate general requirements specified in Table 1, when tested in accordance with the methods given therein.









Table 1 — General requirements

Property	Requirement	Test method
Rolls length m width mm	Not less than the nominal values	EN 426
Overall thickness mm average individual values	Nominal value $\pm 0,20$ Nominal value $\pm 0,25$	EN 428
Thickness of linoleum mm average individual values Thickness of fibrous backing average mm Thickness of foam backing mm average	Nominal value $\pm 0,15$ Nominal value $\pm 0,20$ $\leq 0,80$ Nominal value $\pm 0,10$	EN 429
Mass per unit area g/m ² average	nominal value $\pm 10 \%$	EN 430
Residual indentation after static loading average	 $\pm 0,30$	EN 433
Flexibility Thickness of linoleum (nominal) 2,0 mm 2,5 mm Mandrel diameter 30 mm 40 mm	Shall show no signs of cracking when bent around the appropriate mandrel	EN 435 Method A

5.2 Classification requirements

The classification scheme for resilient floor coverings is described in EN 685. The requirements for floor coverings described in this standard sold as a compound floor covering, in accordance with this scheme, are related to the nominal thickness of the linoleum, as shown in Table 2.

Table 2 — Classification

Class	Symbol	Level of use	Nominal thickness of the linoleum, mm
21		domestic moderate	2,0
22		domestic general	
22+		domestic general	
23		domestic heavy	
31		commercial moderate	2,0
32		commercial general	
33		commercial heavy	
41		light industrial moderate	2,0

6 Marking

Floor coverings of plain and decorative linoleum on a foam backing and/or their packaging shall bear the following marking:

- a) number and date of this European Standard, i.e. EN 686:2011;
- b) manufacturer's or supplier's identification;
- c) product name;
- d) colour/pattern, and batch and roll number;
- e) classes/symbols appropriate for the product;
- f) type of foam backing;
- g) length, width and thickness of rolls.

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);
- cigarette resistance (see EN 1399):

In general use, a linoleum floor covering, depending on the colour and/or pattern, is expected to have the following rating when tested in accordance with EN 1399:

Method A, stubbed cigarettes; rating 4 or higher

Method B, burning cigarettes; rating 3 or higher

- sound insulation (see EN ISO 10140-3 and EN ISO 717-2).

Bibliography

- [1] EN 423, *Resilient floor coverings — Determination of resistance to staining*
- [2] EN 1081, *Resilient floor coverings — Determination of electrical resistance*
- [3] EN 1399, *Resilient floor coverings — Determination of resistance to stubbed and burning cigarettes*
- [4] EN 1815, *Resilient and textile floor coverings — Assessment of static electrical propensity*
- [5] EN ISO 10140-3, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 3: Measurement of impact sound insulation (ISO 10140-3:2010)*
- [6] EN ISO 717-2, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 2: Impact sound insulation (ISO 717-2:1996)*

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