

Code of practice for

Installation of resilient floor coverings

ICS 91.180; 97.150

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee PRI/60, Resilient floor coverings, upon which the following bodies were represented:

- British Adhesives and Sealants Association
- British Association for Chemical Specialities
- British Railways Board
- Contract Flooring Association
- Cork Industry Federation
- Department of Health
- Health and Safety Executive
- Industrial Cleaning Machine Manufacturers Association
- Institute of Chartered Arbitrators
- RAPRA Technology Ltd.
- Soap and Detergent Industries Association
- UK Resilient Flooring Association
- Wood Panel Industries Federation

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Foreword

This British Standard has been prepared by Technical Committee PRI/60. It is a revision of BS 8203:1996 which is withdrawn.

BS 8203:2001+A1:2009 supersedes BS 8203:2001, which is withdrawn. The start and finish of text introduced or altered by Amendment No. 1:2009 is indicated in the text by tags **■** **■**.

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 22, an inside back cover and a back cover.

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Section 1. General

1.1 Scope

This British Standard gives recommendations for the installation of the following floor coverings on both new and existing constructions:

- a) cork floor coverings;
- b) linoleum floor coverings;
- c) plastics floor coverings;
- d) rubber floor coverings.

Special measures are necessary for successful installation of floor coverings such as those used for static control, and are not included in this standard.

This British Standard does not cover the installation of these floor coverings on access flooring.

This British Standard does not include advice on cleaning and maintenance (which is given in BS 6263-2) but it does include guidance on the decisions which should be made at the design stage which will assist cleaning and maintenance and enable the installation to give satisfactory service.

1.2 References

1.2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on page 21. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

1.2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this British Standard are listed on page 22, but reference should be made to the latest editions.

1.3 Definitions

For the purposes of this British Standard the definitions in BS 6100 and the following definitions apply.

1.3.1

agglomerated composition cork

a compound of cork granules with a binder generally not derived from cork cells

1.3.2

agglomerated composition cork with polyvinyl chloride wear layer

a floor covering whose main component is agglomerated cork and whose wear layer is a homogeneous polyvinyl chloride layer

1.3.3

base

the supporting structure to which the floor covering is to be applied

1.3.4

concrete base slab

a concrete slab cast as part of the building construction

1.3.5

cork floor covering

a floor covering whose main component is agglomerated cork and whose wear layer is intended to be used with a finishing coat(s)

1.3.6

cork linoleum

a product produced by calendering a homogeneous mixture of linoleum cement, granulated cork, pigment and inorganic filler onto a fibrous backing

1.3.7

corkment

a product produced by a homogeneous mixture of linoleum cement, granulated cork, pigment and inorganic fillers on a fibrous backing

1.3.8

cover joint

a metallic or plastic finishing element which helps to protect a junction between two floor coverings which could be different in type and/or thickness

1.3.9

expanded polyvinyl chloride floor covering (cushioned polyvinyl chloride)

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

1.3.10

fabricated underlay

a prefabricated board applied to a subfloor to provide a smooth, even surface suitable for the installation of a floor covering

1.3.11

flexible

the generic term for floor coverings which can be bent over a mandrel under specified conditions

1.3.12**floor covering**

a product prefabricated in sheet or tile form, which can be used to cover floors from wall to wall

1.3.13**heterogeneous floor covering**

a floor covering consisting of a wear layer and other compact layers which differ in composition and/or design and may contain a reinforcement

1.3.14**homogeneous floor covering**

a floor covering with one or more layers of the same composition and colour, patterned throughout its thickness

1.3.15**linoleum**

a product produced by calendering a homogeneous mixture of linoleum cement, cork- and/or wood-flour, pigments and inorganic filler onto a fibrous backing

1.3.16**linoleum cement**

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

1.3.17**machine direction**

the direction in which certain floor coverings are manufactured

1.3.18**nosing**

the projecting edge of a step or a metal or plastics finishing profile fixed in this position

1.3.19**polyvinyl chloride floor covering**

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

1.3.20**polyvinyl chloride floor covering on jute backing**

a floor covering consisting of a polyvinyl chloride layer applied to a jute felt backing

1.3.21**polyvinyl chloride floor covering on polyester backing**

a floor covering consisting of a polyvinyl chloride surface layer applied to a polyester felt backing

1.3.22**polyvinyl chloride floor covering on polyester felt with polyvinyl chloride backing**

a floor covering consisting of a polyvinyl chloride surface layer applied to a polyester felt with a polyvinyl chloride backing

1.3.23**polyvinyl chloride floor covering with cork based backing**

a floor covering with a homogeneous or heterogeneous polyvinyl chloride surface layer over a layer of corkment (see 1.3.5) or of cork with a polyvinyl chloride binder

1.3.24**primer**

a liquid product applied to a subfloor, or base, prior to the application of either smoothing compound or adhesive, to seal a porous base and aid adhesion of the subsequent application

1.3.25**resilient**

a material which is able to recover after compression, e.g. plastics, rubber, cork or linoleum

1.3.26**riser**

the vertical part of a step

1.3.27**rubber floor covering**

a floor covering in sheets or tiles, based on natural or synthetic rubber

1.3.28**screed**

a sand and cement topping applied over concrete base slab and finished to receive the floor covering

1.3.29**semi-flexible polyvinyl chloride floor covering**

a floor covering of tiles made from polyvinyl chloride (and modifications thereof) which can only be deflected under specified conditions

1.3.30**smoothing compound**

a smoothing and/or levelling compound applied to a subfloor to provide a smooth, even surface suitable for the installation of a floor covering

1.3.31**subfloor**

see "base" (1.3.3)

1.3.32**surface damp-proof membrane**

a material applied to the surface of the subfloor to inhibit the passage of water vapour

1.3.33**surface preparation**

a set of operations carried out on the subfloor to allow the floor covering to be laid correctly

1.3.34**tread**

the horizontal part of a step

1.3.35**underlayment**

a term used in this code to describe a smoothing compound or a levelling compound

1.3.36**vinyl**

a term commonly used to describe polyvinyl chloride

1.3.37**welding**

the formation of a sealed joint between sheets or tiles

1.3.38**welding rod**

a material in the form of a cord, which is used to join sheets or tiles

1.4 Exchange of information**1.4.1 General**

In order for the correct floor covering to be installed in appropriate conditions, at the right time, etc., it is essential that all parties have a clear understanding of the requirements of the project, e.g. new build or refurbishment, and of the implications for all concerned. To ensure that this is achieved, it is essential that there is wide consultation between all parties involved in the project, including sub-contractors and materials suppliers. This consultation should start early in the design stage but will be necessary throughout the contract, especially should requirements or time scales change and as new sub-contract work is initiated.

As each project will be unique it is impossible to give a definitive list of the information to be exchanged, but the following are typical examples.

1.4.2 Project

The name and location of projects and personnel involved in pre-contract negotiations should be identified.

1.4.3 Design

The flooring layout, and specifications, based on building type and occupational uses should be provided, e.g.:

- a) type and density of foot and/or wheeled traffic;
- b) resilience characteristics;
- c) acoustic absorption levels;
- d) particulars of wet, corrosive, staining or potentially abrasive conditions.

1.4.4 Floor details

The completed drawings/specification should provide comprehensive information on:

- a) whether upper floor, ground floor or below ground level;
- b) whether ground-supported or suspended construction;
- c) particulars of any under floor heating installation or security installation;
- d) position and treatment of expansion joints;
- e) curing and drying times of screeds and bases likely to be required before the installation of floor coverings;
- f) screed or base with finished floor level, permissible departure from datum and class of surface regularity required;
- g) in refurbishment work, the type and condition of existing base or floor finish and any type of treatment required;
- h) type of damp-proof membrane and position within the floor construction, in particular, the need for surface applied membrane where likely drying times for the base exceed time available in the programme;
- i) choice of underlay, underlayments and adhesives, or special requirements, e.g. seam welding and direction of material;
- j) size, position and design of entrance flooring systems.

1.4.5 Entrance flooring systems

Entrance flooring systems will reduce the dirt, grit and water carried into the building by foot traffic, hence will reduce wear and the risk of slipping when the building is in service. The size, position and design of entrance flooring systems should be considered at the design stage (see BS 7953).

1.4.6 Associated details

Details of abutments, skirtings, services (embedded or sleeved), movement joints, separating strips, pattern or border details and junctions with other adjacent flooring and door clearances should be provided.

1.4.7 Contract conditions

A programme for commencement and completion of work should be defined, including any specific requirement for sequenced completion [see especially 1.4.4e)].

1.4.8 Special attendance

Access, unloading, hoisting and storage facilities, heat, light and power and any additional items considered necessary to expedite the work should be provided.

1.4.9 Testing

For any conformity testing of the base, screed, floor covering, etc. details should be provided and responsibilities defined. For instance, it is essential that the responsibility is defined for ensuring that bases or screeds meet the specified standards for level, smoothness, dryness and soundness (impact crushing resistance) before any subsequent or finishing trades are called to commence work. In most circumstances this will be the responsibility of the main contractor.

1.4.10 Responsibilities

Responsibilities for cleaning the construction on completion and giving it initial protection should be defined.

1.4.11 Maintenance

Clear written instructions on the recommended maintenance methods appropriate for the various floor coverings should be provided for the occupier (see BS 6263-2).

Section 2. Materials

2.1 Underlays

2.1.1 General

Guidance on the selection and use of underlays appropriate to the various floor coverings and bases is given in 3.6, 3.7 and 3.8.

2.1.2 Fabricated underlays

Fabricated underlays should be selected from the following:

- a) plywood conforming to BS EN 636 *text deleted* (see 3.8.2);
- b) particleboard Type P2 conforming to BS EN 312 *text deleted*, or if improved bending strength and stiffness are required, Type P4 conforming to BS EN 312 *text deleted* (see 3.4). The board should not have any surface treatment which might affect adhesion;
- c) hardboard Type HB conforming to BS EN 622-2, high density medium board Type MBH conforming to BS EN 622-4 and medium density fibreboard Type MDF conforming to BS EN 622-5 (see 3.8.4).

2.1.3 In situ underlays

In situ underlays should be selected from the following:

- a) mastic asphalt conforming to grade 1 of BS 6925:1988;
- b) cementitious underlay consisting of a specially formulated blend of cement and binder and both fine and coarse aggregates. The binder is commonly a natural rubber latex or synthetic polymer.

2.1.4 Underlayments

Underlayments should be selected from the following:

- a) cementitious underlayment consisting of a specially formulated blend of cement, binder and fine aggregate. The binder is commonly a natural rubber or synthetic polymer dispersion;
- b) powder/water mixes based on casein/cement or polymer/cement and fine aggregate;
- c) epoxy or other resin compounds.

2.2 Floor covering materials

2.2.1 General

Resilient floor coverings should conform to the appropriate British/European Standards. Floor coverings of different specifications may become available during the life of this British Standard and separate standards may be issued to cover them. Unless the manufacturers of these products state to the contrary, the installation techniques described in this British Standard will also be appropriate for these materials.

2.2.2 Cork floor coverings

Cork tiles should conform to BS EN 12104.

2.2.3 Linoleum floor coverings

Linoleum floor coverings should be one of the following types:

- a) plain and decorative linoleum conforming to BS EN 548;
- b) linoleum on a foam backing conforming to BS EN 686;
- c) linoleum with corkment backing conforming to BS EN 687;
- d) cork linoleum conforming to BS EN 688.

2.2.4 Plastics floor coverings

Plastics floor coverings should be one of the following:

- a) homogeneous and heterogeneous flexible unbacked polyvinyl chloride conforming to BS EN 649;
- b) jute or polyester backed polyvinyl chloride and polyvinyl chloride on polyester felt with polyvinyl chloride backing conforming to BS EN 650;
- c) flexible polyvinyl chloride with polyvinyl chloride foam layer conforming to BS EN 651;
- d) flexible polyvinyl chloride with cork based backing conforming to BS EN 652;
- e) expanded (cushioned) polyvinyl chloride conforming to BS EN 653;
- f) semi-flexible polyvinyl chloride tiles conforming to BS EN 654;
- g) tiles on a base of agglomerated composition cork with a polyvinyl chloride wear layer conforming to BS EN 655.