



SLOVENSKI STANDARD
SIST-TS CEN/TS 14472-1:2003

01-oktober-2003

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Resilient, textile and laminate floor coverings - Design, preparation and installation - Part
1: General

Elastische, textile und Laminatbodenbeläge - Planung, Vorbereitung und Verlegung - Teil
1: Allgemeines

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Revetements de sol résilients, textiles et stratifiés - Conception, préparation et
installation - Partie 1: Généralités

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Ta slovenski standard je istoveten z: CEN/TS 14472-1:2003

ICS:

59.080.60	Tekstilne talne obloge	Textile floor coverings
97.150	Netekstilne talne obloge	Non-textile floor coverings

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 14472-1

June 2003

ICS 59.080.60, 97.150

English version

**Resilient, textile and laminate floor coverings - Design,
preparation and installation - Part 1: General**

Revêtements de sol résilients, textiles et stratifiés -
Conception, préparation et installation - Partie 1:
Généralités

Elastische, textile und Laminatbodenbeläge – Planung,
Vorbereitung und Verlegung - Teil 1: Allgemeines

This Technical Specification (CEN/TS) was approved by CEN on 30 september 2002 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This document (CEN/TS 14472-1:2003) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile and laminate floor coverings”, the secretariat of which is held by BSI.

The Technical Specification CEN/TS 14472, *Resilient, textile and laminate floor coverings — Design, preparation and installation*, consists of the following four parts:

Part 1: General

Part 2: Textile floor coverings

Part 3: Laminate floor coverings

Part 4: Resilient floor coverings

This document includes a Bibliography.

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 December 2003, and conflicting national standards shall be withdrawn at the latest by December 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

CEN/TS 14472-1:2003 (E)**Introduction**

European Standards are currently available for

- resilient, textile and laminate floor coverings
- classification schemes that define the characteristics of a location where a floor covering is to be used, and enable an appropriate product to be selected.

For these products to give satisfactory service, they also need to be installed competently, and to receive appropriate maintenance in service. Certain countries have issued guides and/or standards that define good practice for installation and maintenance.

To date, although there has been substantial trade in floor coverings between different countries in Europe, these have largely been installed using the methods of the country importing them. Relatively little installation work has been conducted across European borders, but it is likely that this will increase.

The Technical Specification is not intended to replace the existing national guides or standards on installation. Its purpose is:

- a) to identify a framework of good practice common to the existing national standards,
- b) to identify the principal technical differences in approach between them,

and hence

- c) to foster good standards of installation across Europe, including countries where there is no national standard on installation,
- d) to enable a specifier to specify a common procedure for installation for work in his country, which may be conducted by installers from other countries, and
- e) to enable an installer to conduct work more easily in another country.

This Technical Specification and national codes of practice for the installation of floor coverings give guidance on the associated design and building work that should be addressed if the floor covering installation is to be conducted successfully. These references are not intended as comprehensive guidance on the wider aspects of that work, which should be conducted in accordance with the appropriate codes. Certain codes for the wider aspects of design and building work are listed in the bibliography of this Technical Specification and/or in national codes on the installation of floor coverings.

1 Scope

This Technical Specification gives recommendations for the installation of resilient, textile and laminate floor coverings in new or existing buildings. It describes procedures in design, installation and maintenance which are in use throughout Europe for all floor covering materials and highlights the major differences that may exist in different national procedures.

The guidelines in this Technical Specification are intended for use in cases where manufacturer's instructions, taking account of the national code of practice in the country where the installation is to be made, are not available. References to the national codes that are currently available are listed in the bibliography of the various parts of this Technical Specification.

All parts of the Technical Specification are intended to supplement, and not conflict with, National Standards.

2 Terms and definitions

For the purposes of this Technical Specification, the following terms and definitions apply:

2.1

fabricated substrate

manufactured board made from wood, wood particles or wood fibres in panel form, calcium sulfate (gypsum), etc., to provide a suitable surface to receive the specified floor covering.

2.2

screed (see EN 13318)

layer of well compacted material, commonly a mixture of cement and aggregate, applied in situ to a concrete base at the appropriate thickness.

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2.3

mastic asphalt

mixture of bitumen and an inert mineral aggregate.

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2.4

impregnation

treatment of a base or a screed by application of a liquid product intended to penetrate the pores without forming a continuous layer on the surface.

2.5

levelling layer

layer of compacted material, applied in situ to a sound base or screed where there is a need to raise the level of the floor surface to level a floor that is out of true, or to give a uniform absorbency where water-based adhesives are to be used.

2.6

flowing screed

insitu applied material that sets hydraulically or by chemical cure. Normally a proprietary compound to be used in accordance with manufacturer's recommendations. It is poured or pumped directly to the concrete slab to form a smooth level surface, ready to receive most floor coverings.

2.7

anhydrite screed

formulated flowing screed based on hydraulically setting calcium sulfate.

2.8

underlay

for definition of this term as applied to specific types of floor covering see parts 2, 3 and 4 of this document.

CEN/TS 14472-1:2003 (E)

3 Exchange of information

3.1 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.

3.2 Project

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

3.3 Contract conditions

A programme for commencement and completion of work should be defined, including any specific requirement for sequenced completion.

3.4 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.

3.5 Design

3.5.1 General

The flooring layout and specifications, based on building type and occupational uses should be provided, for example:

- a) type of use : building, rooms;
- b) type and density of foot and/or wheeled traffic;
- c) specific requirements : fire resistance period, acoustic absorption level, slip resistance;
- d) particulars of use : staining, potentially abrasive conditions.

3.5.2 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 substrate, underlayment, adhesives, intermediate products and floor covering;
- j) requirements for jointing e.g. seam welding, direction of material and position of seams; or the position and type of expansion joint profiles;
- k) size, position and design of barrier zones.

3.5.3 Barrier zone

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 the barrier zone should be considered at the design stage, but preferably should be a minimum length of 3 m from the entrance to be effective.

3.5.4 Associated details

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

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3.6 Testing

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Details of any conformity testing of the base, screed, floor covering, etc which is to be conducted, and the party which is to be responsible for this testing. The implications of this also have to be considered in **3.3**. For instance, it is essential that the responsibility is defined for ensuring that bases or screeds meet the specified standards of level, smoothness, dryness and soundness (impact crushing resistance) before any subsequent or finishing trades are called to commence work.

3.7 Health and Safety

Arrangements for liaison and cooperation on health and safety requirements between the different parties in the contract should be established.

3.8 Responsibilities

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

3.9 Maintenance

The customer should be left with adequate details of the maintenance required to enable the floor covering to perform satisfactorily in use. The recommendations should include details of the various types of cleaning and maintenance needed and the time scales at which they should be carried out. It is preferable that such instructions should be in clear, written form, and cover the recommended maintenance methods appropriate for all the types of floor coverings installed.

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For practical information concerning cleaning and maintenance reference should be made to the existing national documents.

4 Selection of materials

Guidance on the selection of appropriate floor coverings together with references to classification schemes and specifications for particular types of floor coverings is given in parts 2,3 and 4 of this CEN Technical Specification.

5 Subfloors

5.1 General

New subfloors should be constructed in accordance with the recommendations given in the relevant national or European standards.

Those responsible for the design and construction of the subfloor should ensure that it meets the requirements, i.e. should ensure that it has the necessary characteristics to allow the floor covering to be installed successfully before the installer of the floor covering is asked to commence work.

These characteristics include:

- a) regularity of concrete floors and screeds;
- b) moisture content of concrete floors and screeds;
- c) integrity of screeds;
- d) making-good of cracks;
- e) treatment of construction joints;
- f) gaps and changes of level;
- g) moisture content of wooden subfloors;
- h) presence of asbestos in an existing floor covering.

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5.2 Materials

5.2.1 Fabricated substrates

Fabricated substrates may be selected from the following:

- a) plywood;
- b) particle board;
- c) fibreboard (e.g. hardboard, MDF);
- d) gypsum board
- e) others.

The strength and construction of the fabricated substrate should be able to function in use without swelling, delamination or disintegration.

5.2.2 Cementitious based substrates (levelling layer)

A levelling layer is used where a conventional sand/cement screed is considered unsuitable because of thickness or other limitations

The leveling layer may be a 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.

5.2.3 Anhydrite screed

It is recommended that the carbide bomb is used to test for moisture content. It is essential to abrade the surface to remove laitance if a flooring adhesive is to be applied, and to provide a barrier primer if cement based products are to be applied. The screed manufacturer should be contacted for advice regarding primers.

5.2.4 Edging, dividing strips and nosings

Edging, dividing strips and nosings are available in wood, metal and plastics. These may be used between similar or dissimilar types, thicknesses, or colours of floor covering, at door openings, or to act as a finish to a floor edge.

5.2.5 Adhesives

The adhesive selected should be considered at the design stage because it may influence the performance during installation, in use, or later during removal. The recommendations of the floor covering manufacturer and adhesive manufacturers should be taken into account, and followed precisely if they are specific as to the type of adhesive which should be used. In particular, recommendations should be followed concerning the application tool, e.g. notched trowel (including the correct size, shape and number of notches) or roller, or heated iron, the coverage rate and any follow on process, rolling etc.

Low emission adhesives may be used to meet requirements on internal air quality, during installation or in service.

Conductive adhesives are available for static sensitive areas. They contain carbon black, metalised fibres or particles.

None of the adhesives can be considered effective as a damp-proof membrane.

5.3 Concrete and screed bases

5.3.1 General

The appearance and performance of the floor coverings covered by this Technical Specification are determined to a large extent by the quality of the prepared base or screed on which the various floor coverings are laid. The subfloor should be constructed in accordance with the recommendations given in the national or preferable European standards.

Those responsible for the design and construction of the subfloor should ensure that it meets the requirements for hardness, strength, soundness, levels and surface regularities, dryness and other design parameters before floor covering installation is commenced.

The appropriate thicknesses are given in national standards. The screed should be suitably finished to receive the underlay, or floor coverings to be applied, and to enable the floor covering to be laid to the designated level.

Flowing screeds or power floated screeds that have a final very dense surface may reduce adhesion and in a number of cases mechanical treatment or a thin latex screed layer may be required.