

SLOVENSKI STANDARD kSIST FprEN 1269:2015

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Tekstilne talne obloge - Ocenitev impregnacij iglanih talnih oblog s preskusom zamazanja

Textile floor coverings - Assessment of impregnations in needled floor coverings by means of a soiling test

Textile Bodenbeläge - Beurteilung von Ausrüstungsmitteln in Nadelvliesbelägen durch die Anschmutzneigung

Revêtements de sol textiles - Évaluation des imprégnations des revêtements de sol aiguilletés au moyen d'un essai d'encrassement

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This draft European Standard is submitted to CEN members for formal vote. It has been drawn up by the Technical Committee CEN/TC 134

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

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Foreword

This document (FprEN 1269:2015) has been prepared by Technical Committee CEN/TC "Resilient, textile and laminate floor coverings", the secretariat of which is held by NBN.

This document is currently submitted to the Formal Vote.

This document will supersede EN 1269:1997.

1 Scope

This European Standard specifies two methods for the evaluation of impregnations or other treatments in needled floorcoverings by means of a soiling test.

There is no correlation known between the two soiling methods.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 985, Textile floor coverings - Castor chair test

EN 1471:1996, Textile floor coverings - Assessment of changes in appearance

EN ISO 139, Textiles - Standard atmospheres for conditioning and testing (ISO 139)

ISO 105-A02, Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour

ISO 565, Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings

ISO 1957, Machine-made textile floor coverings — Selection and cutting of specimens for physical tests

3 Principle

In both tests a fixed quantity of standard artificial soil is scattered over the surface of the specimens which is also subjected to the rolling action of castors or of tetrapod feet for a specified time. After vacuum cleaning, the degree of colour change is assessed by comparing the contrast between treated and untreated test specimens with the contrast of the grey scale.

Depending on the type of apparatus available, either method A or method B can be used.

4 Apparatus

4.1 Method A

4.1.1 Castor chair apparatus,

As described in EN 985, with a total load of 60 daN.

4.1.2 Soil distributor

The soil distributor uses two sieves, one inside and resting on the other to distribute the soil evenly on the part of the circular specimen that is subjected to the wear action of the castors. The whole distributor is placed vertically above the specimen with the sieves in the horizontal position.

The soil is placed in the inner sieve which is vibrated relative to the larger outer sieve thereby achieving even distribution of the soil on the specimen below the two sieves.

The mesh size of both sieves is 0,5 mm (module 31 of ISO 565). The base of each sieve (each of which has walls) is in the shape of a regular trapezium in order to correspond to a sector of the treated area of the test specimen.

The outer (lower) sieve has following base dimensions:

- distance between the parallel sides: 220 mm;
- length of the parallel sides: 100 mm, 45 mm.

Its underside is 40 mm above the specimen.

The dimensions of the inner (upper) sieve are not specified but shall be smaller than the base sieve to permit movement relative to the lower sieve.

4.2 Method B

4.2.1 Drum

A rigid cylindrical drum with bottom and lid shall be used. The inner diameter is (205 ± 5) mm and the inner height of the drum is (200 ± 10) mm.

The drum is made of polyvinylchloride (PVC), with a thickness of at least 6 mm. The bottom and lid are attached to the wall by appropriate means. The lid of the drum is preferably made of transparent material, e.g. Polymethylmethacrylate (PMMA.).

4.2.2 Tetrapod

A tumbler consisting of a central metal sphere with four outer feet arranged in the shape of a regular tetrahedron. Each foot is covered with a spherical polyurethane cap. In operation the tetrapod tumbles inside the rotating drum so that the feet impact on the test specimen lining the drum.

Tetrapod specifications:

- total mass: (1 000 ± 25) g;
- angle between any two legs: 109,5°;
- length of the foot: (62 ± 2) mm;
- diameter of the foot: (47 ± 2) mm;
- length of the metal leg: 32 mm;
- diameter of the metal leg: 25 mm;
- socket depth of the foot: 20 mm;
- free standing height tetrapod: (124 ± 2) mm;
- material of the feet: polyurethane elastomer;
- hardness of the foot top: (75 ± 5) shore.

4.2.3 Driving system

The drum lies loose on rollers mounted on a support and drive shaft. The drum is prevented from moving in its axial direction by smooth running wheels fixed between the shafts or by a suitable profile on the rollers. It is important that the axis of the drum rotation is horizontal, which should be checked by placing a spirit level along the upper surface of the drum when in position. The rotational frequency of the drum shall be (50 ± 2) cycles per minute.

A counter is incorporated in the system, so that the number of rotations of the drum can be recorded. The counter may be pre-set to stop the apparatus after a given number of revolutions.

NOTE Longer driving rollers can be used to rotate a number of drums at the same time provided that all the requirements of this standard are met.

4.3 Equipment common to both methods

4.3.1 Standard soil

The soil shall have the following composition (% by mass):

- Quartz silica: 88,30 %;
- Kaolin: 9,35 %;
- Yellow ferrous oxide: 0,20 %;
- Black ferrous oxide: 0,60 %;
- Paraffin oil: 1,55 %.

The soil shall have following colourimetric characteristics:

- L: 46,5 ± 1,5;
- a: 4.2 ± 0.3 ;
- b: $11,5 \pm 0,5$.

Since the colourimetric characteristics of the soil change with time and exposure to light, the soil shall be kept in the dark and its colourimetric characteristics (L, a, b) shall be checked every 6 months against the specified tolerances.

4.3.2 Vacuum cleaner

A household type apparatus shall be used, equipped with a smooth, approximately 2 500 mm² section nozzle having the following characteristics:

- partial vacuum = (1 900 ± 190) mm water column;
- air flow rate = $(30 \pm 3) \text{ dm}^3/\text{s}$

4.3.3 Large dimension grey scales

A set of large dimension grey scales including half degrees according to ISO 105-A02.

4.3.4 Apparatus

An observation device according to Clause 5 in EN 1471:1996.

5 Sampling and preparation of the specimens

5.1 Sampling and selection of the specimens

Take a representative sample of four different coloured samples from the commercial range of the floor covering in accordance with the methods given in ISO 1957.