SLOVENSKI STANDARD
SIST EN 1399:1999

01-marec-1999

Netekstilne talne obloge - Ugotavljanje odpornosti proti cigaretnim ogorkom in žarečim cigaretam

Resilient floor coverings - Determination of resistance to stubbed and burning cigarettes

Elastische Bodenbeläge - Bestimmung der Widerstandsfähigkeit gegen Ausdrücken und Abbrennen von Zigaretten

Revetements de sol résilients - Détermination de la résistance aux brulures de cigarettes et aux cigarettes écrasées

Ta slovenski standard je istoveten z: **EN 1399:1997**

ICS:

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
97.150	Netekstilne talne obloge	Non-textile floor coverings

SIST EN 1399:1999 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1399

September 1997

ICS 13.220.40; 97.150

Descriptors: floor coverings, linoleum, tests, determination, resistance to burning, cigarettes

English version

Resilient floor coverings - Determination of resistance to stubbed and burning cigarettes

Revêtements de sol résilients - Détermination de la résistance aux brûlures de cigarettes et aux cigarettes écrasées

Elastische Bodenbeläge - Bestimmung der Widerstandfähigkeit gegen Ausdrücken und Abbrennen von Zigaretten

This European Standard was approved by CEN on 1997-08-03. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 134 "Resilient and textile 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 March 1998, and conflicting national standards shall be withdrawn at the latest by March 1998.

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

1 Scope

This European Standard specifies two methods, for determining the resistance of resilient floor coverings to stubbed and burning cigarettes .

2 Principle

2.1 Method A. Resistance to stubbed cigarette.

A load is applied to a burning cigarette butt placed on the surface of a test piece. After cleaning, the surface is examined under specified light conditions for any visible changes.

2.2 Method B Resistance to burning cigarette. A burning cigarette is placed in full-length contact with the horizontal surface of a test piece. After cleaning, the surface is examined for visible changes.

3 Apparatus and materials

3.1 Thermometer, to measure air temperature

3.2 Chronometer, which reads to 1 s.

3.3 A device, shown in fig 1, consisting of:

3.3.1 A straight, seamless steel tube, of inner diameter of ($49{,}8\ ^{+0{,}2}_{0}$) mm and minimum wall thickness of 3,6 mm incorporating two guide pins (see figure 2).

3.3.2 A cylindrical brass weight, of diameter ($49{,}5\ ^{+0{,}2}_{0}$) mm, length ($152\ ^{+0{,}5}_{0}$) mm and mass approximately 2,5 kg, incorporating two guide grooves and a lower indenter of diameter ($16\ ^{+1}_{0}$) mm and length approximately 30 mm.

3.3.3 A turntable holder, for the test piece.

3.3.4 A frame, on which the parts of 3.3.1 and 3.3.2 are mounted.

3.4 Illumination device, comprising a lamp of correlated colour temperature 5 500 K to 6 500 K, mounted to give an intensity of light at the viewing platform of (1 500 ± 100) Lx and in such a way as to illuminate the test piece vertically from above. The surroundings shall be neutral and darkened. The intensity of the light shall be checked frequently by the use of a luxometer. The lifetime of the lamp, as given by the manufacturer, shall not be exceeded.

3.5 Rotary viewing table, which enables the test piece to be rotated so that it may be viewed from all directions under the standard illumination.

3.6 Materials

3.6.1 Three common brands of pale tobacco cigarette, without filter or mouthpiece, with round cross-section with diameter approximately 8 mm and length approximately 70 mm.

3.6.2 Standard cleaning and stain removal products.

3.6.2.1 White cotton, in pad or cloth form.

3.6.2.2 Brushes, hard, unlikely to score the surface.

3.6.2.3 Denatured ethanol.

3.6.2.4 Abrasives, abrasive scouring pads, steel wool No.00 or scouring powder or abrasive paper, grain size P240 or finer, used with water.

3.6.2.5 Special cleaning products; special products recommended by the floor covering manufacturers.

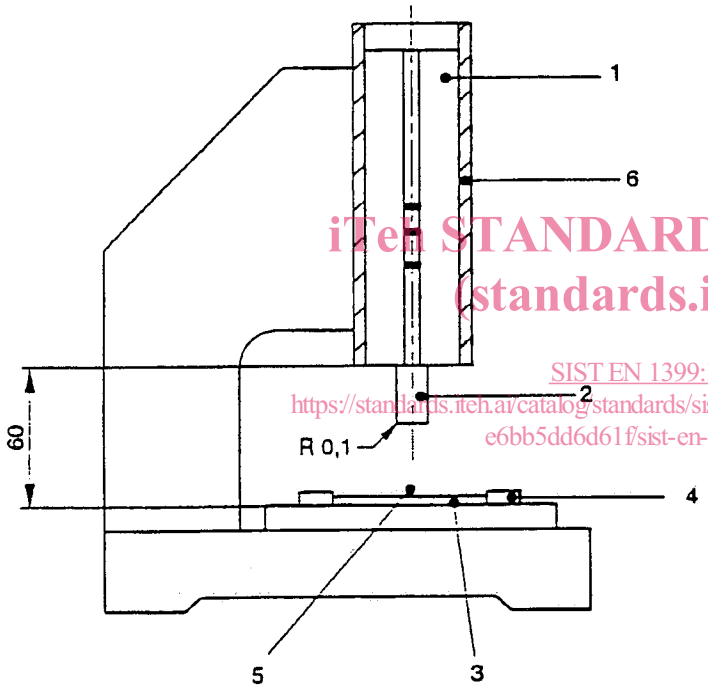

Figure 1
Test device

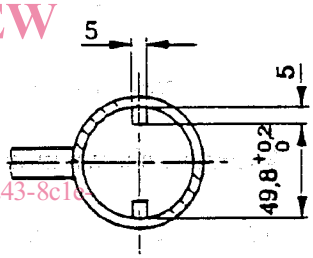

Figure 2
Steel tube with guide pins and cylindrical brass weight with guide grooves

Key

1 Cylindrical brass weight
2 Indenter
3 Test piece
4 Test piece holder
5 Burning cigarette
6 Steel tube

4 Sampling and preparation of test pieces

Take a representative sample from the available material.

Take at least one test piece per type of cigarette, of minimum length 100 mm and minimum width 100 mm at equal distances across the sample, the distance between the outer edge of the sample and the nearest edge of the test piece being at least 100 mm.

5 Conditioning

Condition the test pieces and cigarettes at a temperature of (23 ± 2) °C and relative humidity of (50 ± 5) % for a minimum of 48h. Maintain them in these conditions until immediately prior to the test.

6 Procedure

6.1 General

Use a substantially draught-free environment at room temperature, record the temperature when the test is carried out.

Use at least one cigarette per cigarette brand.

If tests are run concurrently, the spacing of the cigarettes shall be such that no mutual influence is possible.

The mass per unit length of each cigarette shall be (0,14 ± 0,02) g/cm.

NOTE : If necessary, this may be achieved by tapping the cigarette vertically to compact the tobacco.

6.2 Method A Stubbed cigarette test

Light one end of a cigarette and draw air through it until 10 mm has been consumed. Place the smouldering cigarette in position on the surface of the test piece, ensuring that it is in full-length contact with the horizontal surface of the test piece, and that the glued seam of the cigarette is facing upwards.

For floor coverings with profiled surfaces, place the cigarette on the stud or whatever raised profile is incorporated.

Allow the cigarette to burn for a further 20 s. Apply the load, ensuring that the cylinder fits on the lighted cigarette butt. Rotate the test piece through 90° within 2 s and remove the load.

If a cigarette extinguishes before burning for 20 s, repeat the test with a new cigarette placed in a new position.

6.3 Method B Burning cigarette test

Light one end of a cigarette and draw air through it until 10 mm has been consumed. Place the cigarette on the surface of the test piece, ensuring that the it is in full-length contact with the horizontal surface of the test piece, and that the glued seam of the cigarette is facing upwards.

For floor coverings with profiled surfaces, place the cigarette between the studs or whatever raised profile is incorporated.

Allow the cigarette to burn away for another 20 mm and then remove the remains of the cigarette from the surface of the test piece.

If a cigarette extinguishes before burning for 20 mm, repeat the test with a new cigarette placed in a new position.

6.4 Cleaning and observation

6.4.1 Remove, if possible, any combustion residue from the surface using cotton moistened with ethanol. After cleaning examine the residual staining from a distance of approximately 800 mm at an approximate angle of 45° and from all directions by slowly rotating the viewing table.

6.4.2 If a stain is visible, clean the surface using a cleaning product chosen from those listed in 3.6.2, 3.6.4 or 3.6.5 and examine as described in 6.4.1. Record the cleaning product used.

7 Expression of results

For each of the cigarette brands express the results, after cleaning the surface according to 6.4.1 and 6.4.2, in terms of the ratings in table 1. The overall result for the test shall be the individual result which shows the severest damage (lowest rating) and this overall result shall be stated in the test report.

Table 1: Presentation of results

Rating	Effect on surface of test piece
5	No visible change
4	Slight change of gloss only visible at certain viewing angles and/or slight brown stain
3	Moderate change of gloss and/or moderate brown stain
2	Severe brown mark, but no destruction of surface
1	Blistering and/or destruction of surface