



SLOVENSKI STANDARD
SIST EN 1516:2002
01-september-2002

Podloge za športne dejavnosti – Ugotavljanje odpornosti proti vtiskovanju

Surfaces for sports areas - Determination of resistance to indentation

Sportböden - Bestimmung des Eindruckverhaltens

Sols sportifs - Détermination de la résistance à l'indentation

Ta slovenski standard je istoveten z: EN 1516:1999

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ICS:

97.220.10 Športni objekti Sports facilities

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EUROPEAN STANDARD
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EN 1516

August 1999

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English version

Surfaces for sports areas - Determination of resistance to indentation

Sols sportifs - Détermination de la résistance à l'indentation

Sportböden - Bestimmung des Eindruckverhaltens

This European Standard was approved by CEN on 8 July 1999.

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.

This European Standard exists 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.

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

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Page 2
EN 1516:1999

Contents

	Page
Foreword	3
1 Scope	4
2 Principle	4
3 Apparatus	4
4 Test specimens	4
5 Conditioning	4
6 Procedure	5
7 Expression of results	5
8 Test report	5

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 217 "Surfaces for sports areas", 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 February 2000, and conflicting national standards shall be withdrawn at the latest by November 2002.

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.

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1 Scope

This European Standard specifies a method of test for the determination of resistance to indentation of certain surfaces for sports areas.

2 Principle

The resistance to indentation and residual indentation are determined by measuring the depth of penetration of an indenter under a given load and by measuring the recovery of the material over time.

3 Apparatus

3.1 Loading rig, comprising a cylindrical steel indenter of diameter $(25 \pm 0,2)$ mm, with a flat contact surface having an edge radius of $(0,5 \pm 0,1)$ mm capable of exerting an initial force of $(3 \pm 0,5)$ N and a test force of (500 ± 10) N perpendicularly to the surface.

The rig shall be such that the test force can be applied gradually, without shock.

3.2 Means of measuring the depth of penetration of the indenter, under both initial and test loading, e.g. a dial gauge, having a scale interval of 0,01 mm.

3.3 Means of measuring the depth of penetration of indentation after recovery, e.g. a dial gauge, having a scale interval of 0,01 mm attached to a cylindrical steel probe of diameter $(6 \pm 0,2)$ mm.

4 Test specimens

Prepare three specimens of material of minimum length 300 mm and minimum width 300 mm, in combination with the supporting layers to be used in service, using the recommended method of attachment in accordance with the manufacturer's instructions.

NOTE. For certain constructions, e.g. dynamic base or area elastic floor, a larger test piece may be required, to be representative of a completed construction.

5 Conditioning

Condition the specimens for a minimum of 3 h at the test temperature, except when the material is known to be sensitive to humidity, in which case condition them for a minimum of 88 h at (50 ± 5) % relative humidity at the test temperature. Condition and test the specimens at a temperature of (23 ± 2) °C.

NOTE. Tests can be carried out on the completed construction.

6 Procedure

Arrange the loading rig in position over a specimen and ensure that the indenter is vertical and the surface of the specimen is horizontal.

Place the indenter in contact with the centre of the specimen and apply a force of (500 ± 10) N to the specimen through the indenter.

After $5 \text{ h } \pm 5 \text{ min}$, remove the indenter. Measure the depth of penetration with a probe (see 3.3) under a load of $(3 \pm 0,5)$ N after $5 \text{ min} \pm 30 \text{ s}$ and again after $24 \text{ h} \pm 1 \text{ h}$.

Repeat the procedure for each of the other two specimens.

7 Expression of results

The residual indentations are the depths of penetration measured 5 min and 24 h after removal of the load.

Calculate the mean residual indentations at both times for the three specimens.

8 Test report

The test report shall contain the following:

- a) the number and date of this standard, i.e. EN 1516:1999;
- b) complete identification of the surface tested including type, manufacturer's reference and previous history;
- c) the temperature at which the test was carried out;
- d) the mean values of residual indentation;
- e) the individual test results, if required.