SLOVENSKI STANDARD
SIST EN 1517:2020

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Nadomešča:
SIST EN 1517:2002

Podloge za športne dejavnosti - Ugotavljanje odpornosti proti udarcu

Surfaces for sports areas - Determination of resistance to impact

Sportböden - Bestimmung der Schlagfestigkeit

Sols sportifs - Détermination de la résistance au choc

Ta slovenski standard je istoveten z: **EN 1517:2020**

ICS:

97.220.10	Športni objekti	Sports facilities

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EUROPEAN STANDARD

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Supersedes EN 1517:1999

English Version

Surfaces for sports areas - Determination of resistance to impact

Sols sportifs - Détermination de la résistance au choc

Sportböden - Bestimmung der Schlagfestigkeit

This European Standard was approved by CEN on 2 March 2020.

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 CEN-CENELEC Management Centre or to any CEN member.

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

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European foreword

This document (EN 1517:2020) has been prepared by Technical Committee CEN/TC 217 “Surfaces for sports areas”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1517:1999.

The main changes compared to the previous edition are listed below:

— enhanced description of test apparatus,

— more defined procedure for assessing cracking, delamination or permanent indentation,

— procedure for on-site tests.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document specifies a method for the determination of resistance to impact of sports floor systems. It is primarily designed to be used on surfaces intended for use in indoor sports halls. The test can be undertaken in the laboratory or on site.

When undertaking tests on site, it is important to note that permanent damage to the sports floor can be caused.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following term and definition applies.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp/ui

3.1
cracking
vertical damage in the coating or top layer a minimum of 300 *µm* deep or any tearing or splitting damage to the underlying layers in the sports floor system

4 Principle

A weighted indenter is dropped from a given height onto the surface and the area of impact is subsequently examined for damage.

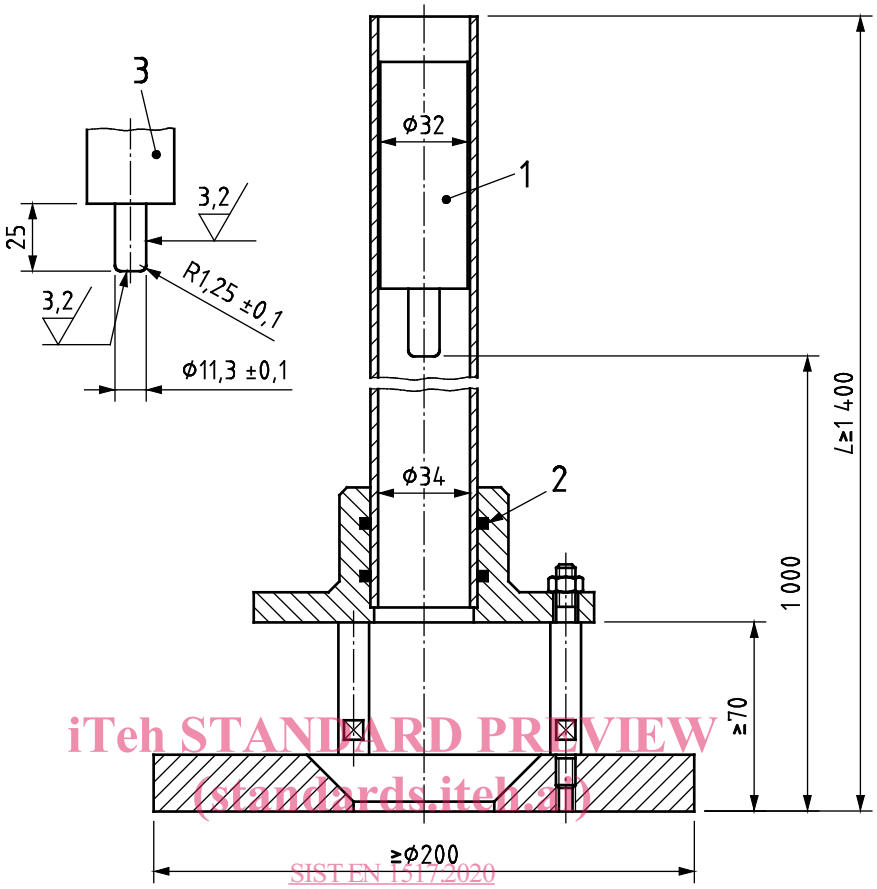
5 Apparatus

5.1 A cylindrical indenter as shown in Figure 1 and having a diameter (11,3 ± 0,3) mm, with a flat contact surface having an edge radius of diameter (1,25 ± 0,1) mm, a mass of (800 ± 10) g and means of dropping the indenter vertically down a guide tube from a height of (1 ± 0,01) m, essentially without friction.

5.2 Pocket-lens/microscope with a magnification of x 4.

5.3 Laboratory thermometer capable of recording the surface temperature of the test specimen to 0,5 °C.

Dimensions in millimetres



Key

1 indenter

2 guide tube

3 indenter mass and contact surface

Figure 1 — Schematic layout of indenter and guide

6 Test specimen

Prepare a specimen of the surface of minimum length 300 mm and minimum width 300 mm, in combination with the supporting layers with which it is 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 floors, a larger test piece is needed to represent a complete construction.

7 Conditioning

Condition the test specimen for a minimum of 3 h at a test temperature of 10°C +/-1°C, except where the material is known to be sensitive to humidity, in which case condition it for a minimum of 88 h at (50 ± 5) % relative humidity at the test temperature. Ensure that the test is carried out within such time that the specimen remains within 1 °C of the conditioning temperature.

NOTE If necessary, the test can be carried out under the prevailing site temperature conditions. Tests can also be carried out on the complete construction.

8 Procedure

8.1 Record the surface temperature before each measurement.

8.2 Arrange the indenter and guide tube in position over the test specimen and ensure that the guide tube is vertical and the surface of the test specimen is horizontal.

8.3 Release the indenter without shock and allow it to impact the surface of the test specimen or the on-site flooring. Undertake at least five measurements, equally distributed over the surface of the sample/flooring and at least 5 cm from each other and from the edge of the test specimen.

8.4 Immediately following the test, examine the test specimen for damage such as cracking, delamination or permanent indentation at each point of impact. The assessment of any damage shall be made without bending or deforming the test specimen by force or mechanical means.

8.5 If any indentations have occurred measure their depth to an accuracy of 0,1 mm 24 ± 1h after the impact using the dial gauge.

8.6 If any damage, such as cracking, delamination or permanent indentation, is visually detected, cut through the point of impact with a straight sharp knife suitable for the type of sports floor and measure the depth of the damage using a pocket-lens/microscope with a magnification of x 4.

8.7 For on-site testing visually assess (without instruments) from a distance of a minimum of 50 cm of the surface whether any damage is recognizable. Assessment shall be done without any deformation of the floor by force or mechanical means. A crack has to be clearly assessable and shall not be confused with any fading or superficial damage in the top layer.

8.8 Photograph any damage or indentation observed to illustrate.

9 Test report

The test report shall contain the following:

a) the number and date of this document, i.e. EN 1517:2020;

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 results of the test in accordance with Clause 7; and

e) photographic record of any damage observed.