



# SLOVENSKI STANDARD

## SIST EN 14952:2006

01-februar-2006

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**Površine za športne dejavnosti – Ugotavljanje absorpcije vode pri oblogah iz nevezanih mineralov**

Surfaces for sports areas - Determination of water absorption of unbound minerals

Sportböden - Bestimmung der Wasseraufnahme von ungebundenen mineralischen Belägen

Sols sportifs - Détermination de l'absorption d'eau des minéraux non liés

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**Ta slovenski standard je istoveten z: EN 14952:2005**

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**ICS:**

97.220.10      Športni objekti                                      Sports facilities

**SIST EN 14952:2006**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 14952**

November 2005

ICS 97.220.10

English Version

## Surfaces for sports areas - Determination of water absorption of unbound minerals

Sols sportifs - Détermination de l'absorption d'eau des minéraux non liés

Sportböden - Bestimmung der Wasseraufnahme von ungebundenen mineralischen Belägen

This European Standard was approved by CEN on 12 September 2005.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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## Foreword

This European Standard (EN 14952:2005) 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 May 2006, and conflicting national standards shall be withdrawn at the latest by May 2006.

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

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## EN 14952:2005 (E)

### 1 Scope

This European Standard specifies a method for the determination of water absorption of unbound minerals (grain size till 6 mm) for outdoor sports surfaces.

### 2 Principle

A cylinder with a perforated bottom, filled with a dry unbound mineral, is placed in a water tank. The amount of water absorbed by the material in a specified period of time is a measure for the water absorption.

### 3 Apparatus

**3.1 Cylinder (acrylic glass)**, height 200 mm and diameter 110 mm.

NOTE The apparatus is shown schematically in Figure 1.

**3.2 Water tank**, length 400 mm minimum, width 250 mm minimum and height 100 mm minimum.

NOTE The apparatus is shown schematically in Figure 2.

**3.3 Compaction apparatus**, comprising the following.

- a) falling weight, having a mass of  $(2\,000 \pm 25)$  g;
- b) stand, having a mass of  $(1\,400 \pm 100)$  g;
- c) rubber disc, having a Shore A hardness of  $(45 \pm 5)$ , stiffness of  $(1.2 \pm 0.2)$  kN/mm and a resilience of  $(50 \pm 5)$  %.

NOTE The apparatus is shown schematically in Figure 3.

**3.4 Supporting ring**

NOTE The supporting ring is shown schematically in Figure 4.

**3.5 Means of measuring time** to within  $\pm 1$  s and mass to within  $\pm 0,01$  g.

**3.6 Funnel**, diameter  $(200 \pm 20)$  mm.

### 4 Test specimen

Prepare a test specimen having a grain size of 6 mm and a mass of at least 5 000 g. The specimen shall be dried in an oven at a temperature of  $(105 \pm 5)$  °C for at least 24 h. After drying, the specimen shall be exposed to a temperature of  $(23 \pm 2)$  °C and a relative humidity of  $(50 \pm 10)$  % for at least 24 h.

### 5 Conditioning

Carry out the test under laboratory conditions at a temperature of  $(23 \pm 2)$  °C and a relative humidity  $(50 \pm 10)$  %.

## 6 Procedure

Take 1 250 g of the specimen (dry mass =  $D$ ) and fill the cylinder (3.1) with this material through a funnel (3.6) by turning the funnel slowly around approximately 20 mm above the surface. Place the cylinder on the supporting ring (3.4). Place the compaction apparatus (3.3) into the cylinder on top of the specimen. Compact the specimen 10 times by lifting the weight ( $380 \pm 5$ ) mm and releasing it into a free fall onto the specimen.

Determine the mass of the cylinder and the specimen ( $A$ ).

Fill the water tank (3.2) with ( $40 \pm 2$ ) mm of water and slowly place the cylinder with the specimen vertically in the water tank. Leave the cylinder in the tank for  $15 \text{ min} \pm 2 \text{ s}$ . Remove the cylinder from the tank, wipe it quickly and carefully and weigh the cylinder and the specimen ( $B$ ).

Carry out this procedure twice.

## 7 Expression of results

Calculate the water absorption, expressed in grams, as ( $B - A$ )

where

$A$  is the mass of the cylinder and the dry specimen expressed in grams;

$B$  is the mass of the cylinder and the specimen with absorbed water expressed in grams.

If the difference between the results of the two tests is less than 10 g, calculate the average of both measurements and record this as the water absorption. If the difference is more than 10 g, repeat the procedure and ignore the first result. If after the third procedure the difference is still more than 10 g, record the minimum and maximum values of all results of the three procedures and the average.

Express the water absorption as a percentage of the dry mass of the specimen, i.e:

$$\frac{B - A}{D} \times 100$$

where

$A$  is the mass of the cylinder and the dry specimen expressed in grams;

$B$  is the mass of the cylinder and the specimen with absorbed water expressed in grams;

$D$  is the dry mass of the sample.

## 8 Test report

The test report shall include the following information:

- absorption of water, expressed in grams;
- reference to this European Standard, i.e. EN 14952:2005;
- nature of the specimen;
- details of any deviation from the procedure.

Dimensions in millimetres

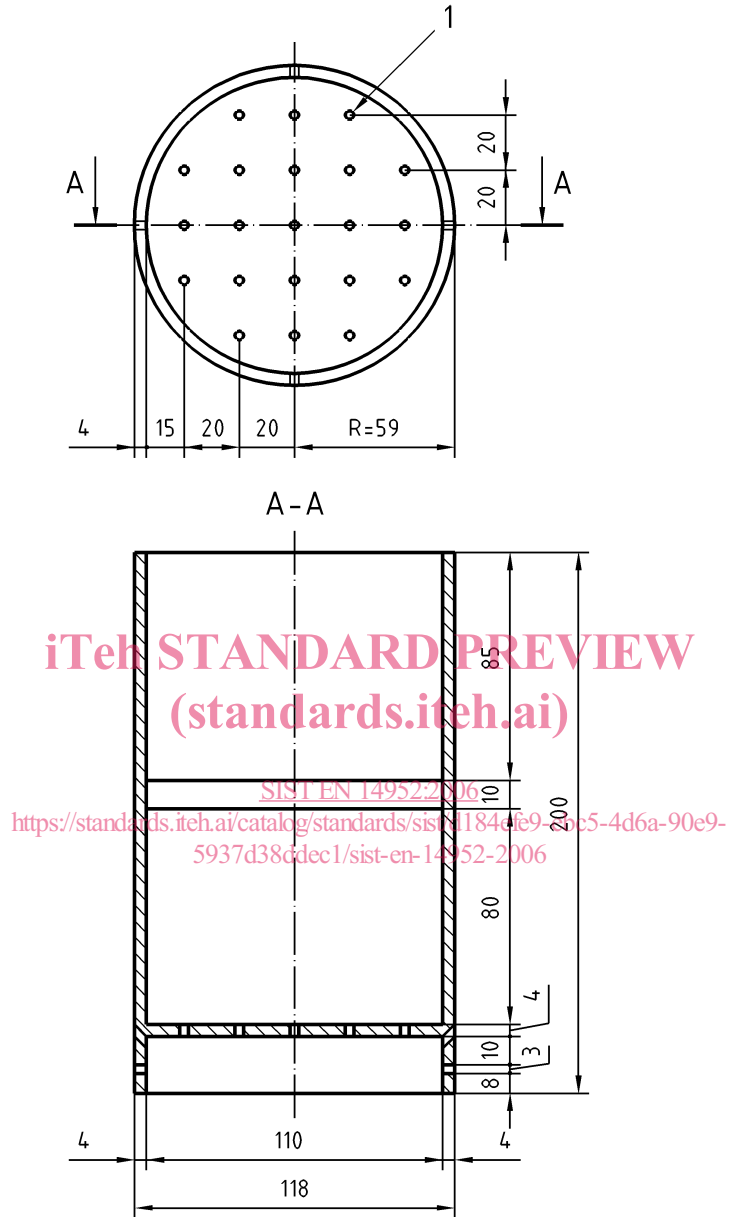
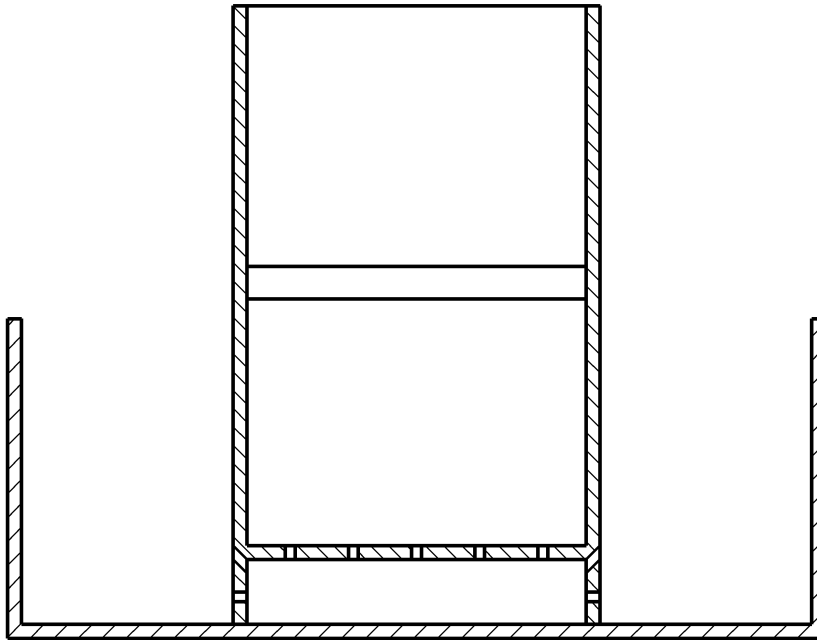


Figure 1 — Schematic illustration of the cylinder





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Figure 2 — Schematic illustration of the cylinder in the water tank  
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