

**Sportimiskohtade pinnakattematerjalid.
Universaalseks sportimiseks mõeldud
siseruumide pinnakatete tehnilised nõuded**

Surfaces for sports areas - Indoor surfaces for multi-sports use - Specification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14904:2006 sisaldab Euroopa standardi EN 14904:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.05.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14904:2006 consists of the English text of the European standard EN 14904:2006.</p> <p>This document is endorsed on 29.05.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This European Standard specifies requirements for surfaces for indoor facilities for multi-sports use. It also covers surface systems which include both their supporting and upper layers whether prefabricated, produced in situ or a combination of the two. It also provides for the evaluation of conformity of products to the requirements of this European Standard. This European Standard is not applicable to indoor tennis halls.</p>	<p>Scope:</p> <p>This European Standard specifies requirements for surfaces for indoor facilities for multi-sports use. It also covers surface systems which include both their supporting and upper layers whether prefabricated, produced in situ or a combination of the two. It also provides for the evaluation of conformity of products to the requirements of this European Standard. This European Standard is not applicable to indoor tennis halls.</p>
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English Version

**Surfaces for sports areas - Indoor surfaces for multi-sports use -
Specification**

Sols sportifs - Sols multi-sports intérieurs - Spécification

Sportböden - Mehrzweck-Sporthallenböden -
Anforderungen

This European Standard was approved by CEN on 2 March 2006.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This European Standard (EN 14904:2006) 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 October 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this European Standard.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies requirements for surfaces for indoor facilities for multi-sports use. It also covers surface systems which include both their supporting and upper layers whether prefabricated, produced in situ or a combination of the two. It also provides for the evaluation of conformity of products to the requirements of this European Standard. This European Standard is not applicable to indoor tennis halls.

NOTE "Multi-sports" will be defined by appropriate national provisions.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 717-1, *Wood-based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method*

EN 717-2, *Wood-based panels - Determination of formaldehyde release - Part 2: Formaldehyde release by the gas analysis method*

EN 1516, *Surfaces for sports areas - Determination of resistance to indentation*

EN 1517, *Surfaces for sports areas - Determination of resistance to impact*

EN 1569, *Surfaces for sports areas - Determination of the behaviour under a rolling load*

EN 12235, *Surfaces for sports areas - Determination of vertical ball behaviour*

EN 12673, *Water quality - Gas chromatographic determination of some selected chlorophenols in water*

EN 13036-4, *Road and airfield surface characteristics - Test methods - Part 4: Method for measurement of slip/skid resistance of a surface - The pendulum test*

EN 13036-7, *Road and airfield surface characteristics - Test methods - Part 7: Irregularity measurement of pavement courses - the straightedge test*

EN 13238, *Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates*

EN 13501-1, *Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests*

EN 13745, *Surfaces for sports areas - Determination of specular reflectance*

EN 14808, *Surfaces for sports areas — Determination of shock absorption*

EN 14809, *Surfaces for sports areas — Determination of vertical deformation*

EN ISO 2813, *Paints and varnishes - Measurement of specular gloss of non-metallic paint films at 20°, 60° and 85° (ISO 2813:1994, including Technical Corrigendum 1:1997)*

EN ISO 5470-1, *Rubber- or plastics-coated fabrics - Determination of abrasion resistance - Part 1: Taber abrader (ISO 5470-1:1999)*

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

ISO 11379, *Textile floor coverings - Laboratory cleaning procedure using spray extraction*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1

facilities for multi-sports use

sports halls where more than one sport is played on the surface, e.g. handball, basketball, volleyball, five-a-side football, and which may also be used for physical education and other sporting activities

3.2

area-elastic sports floor

sports floor, to which the application of a point force causes deflection over a relatively large area around the point of application of the force

3.3

point-elastic sports floor

sports floor, to which the application of a point force causes deflection only at or close to the point of application of the force

3.4

combined-elastic sports floor

area-elastic sports floor with a point-elastic top layer, to which the application of a point force causes both localized deflection and deflection over a wider area

3.5

mixed-elastic sports floor

point-elastic sports floor with a synthetic area-stiffening component

4 Requirements for safety in use

4.1 General

Sports surfaces undergo a complex reaction when subjected to dynamic loading. The desired components of the interaction are deformation under load, the ability to absorb impact, and the energy restitution of the impact, i.e. the amount of energy returned to a sports-person from the surface on which he/she is performing. The ability of a surface to absorb an impact is an important safety feature of a sports surface. Values specified are, therefore, inevitably a compromise between these fundamental characteristics. Sports surfaces react differently under different temperatures and strain rates; they become harder at low temperatures and softer at high temperatures.

An important requirement for safety and sports performance is for there to be sufficient grip between the footwear of the athlete and the sports surface. Insufficient grip can result in the athlete slipping on the surface; too much grip can place unacceptable stress on joints and muscle ligaments.

Information on resistance to repeated impact of synthetic floors is given in Annex A.

4.2 Friction

When tested by the method described in EN 13036-4 using CEN rubber under dry conditions at a temperature of $(23 \pm 2) ^\circ\text{C}$, the mean of the Pendulum Test Value shall be between 80 and 110 and no individual test result shall differ from the mean by more than four units.