BRITISH STANDARD

BS EN
14904:2006

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

The European Standard EN 14904:2006 has the status of a British Standard

ICS 97.220.10

BSI
British Standards

National foreword

This British Standard is the official English language version of EN 14904:2006. It partially supersedes BS 7044-4:1991, which has been declared obsolescent. EN 14904:2006 is one of a package of standards being produced by CEN/TC 217. On publication of the entire package, BS 7044 will be withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/57, Surfaces for sports areas, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

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

Sols sportifs - Sols multi-sports intérieurs - Spécification

Sportböden - Mehrzweck-Sporthallenböden - Anforderungen

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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.

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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of an identical text or by endorsement, at the latest by October 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.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 ± 2) °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.

4.3 Shock absorption

When tested by the method described in EN 14808, carrying out a minimum of four tests plus one test for every 500 m^2 of area, the mean force reduction shall be between 25 % and 75 % and no individual result shall differ from the mean by more than ± 5 units.

NOTE 1 These values are laboratory values. Measurements on site may be carried out at different temperatures and humidities depending on the ambient conditions of the sports hall, in which case the surface temperature and relative humidity should be recorded in the test report.

NOTE 2 Information on typical shock absorption and vertical deformation values for elastic floors is given in Annex B.

4.4 Vertical deformation

When tested by the method described in EN 14809, the vertical deformation shall not exceed 5,0 mm.

NOTE 1 These values are laboratory values. Measurements on site may be carried out at different temperatures and humidities depending on the ambient conditions of the sports hall, in which case the surface temperature and relative humidity should be recorded in the test report.

NOTE 2 Information on typical shock absorption and vertical deformation values for elastic floors is given in Annex B.

5 Technical requirements

5.1 Vertical ball behaviour

When tested by the method described in EN 12235 using a basketball, carrying out a minimum of four tests plus one test for every 500 m^2 of area, the mean relative rebound height shall be ≥ 90 % of the rebound height on concrete and no individual result shall differ from the mean by more than ± 3 units.

5.2 Resistance to a rolling load

NOTE This property is important to ensure that the surface will not be damaged by equipment or seating that might be moved around on it.

When tested by the method described in EN 1569, the minimum resistance shall be 1 500 N, the maximum indentation shall be 0,5 mm under a 300 mm straight edge and no perceivable damage shall be observed after the test.

5.3 Resistance to wear

NOTE This property is important to ensure a reasonable expected lifetime in use, particularly for high usage areas (e.g. areas in front of goal on ball pitches) which are prone to loss of material by abrasion.

For synthetic surfaces, when tested by the method described in EN ISO 5470-1, using H18 wheels with a 1 kg load, the maximum loss in mass per 1 000 cycles shall be 1 000 mg.

For coatings and lacquers intended to be applied as part of scheduled maintenance, when tested by the method described in EN ISO 5470-1, using CS10 wheels with a 500 g load, the maximum loss in mass per 1 000 cycles shall be 80 mg.

5.4 Reaction to fire

5.4.1 Specimen preparation and conditioning

Preparation of test specimens shall be as defined in the appropriate fire test standard except that, in the case of textile sports floor coverings that contain fire retardants, where required, a washing and cleaning procedure similar to that used in practice shall be carried out to verify the durability of surface fire retardant treatments (see 5.4.3).

The specimens shall be tested on one of the two standard substrates specified for floorings in EN 13238, according to the intended end use.

The composition of the product, including the presence of any fire retardant additive (if applicable), shall be declared by the manufacturer prior to type testing.

5.4.2 Application rules

If the specimens are tested using an adhesive, the test result is valid for the tested sports floor covering with that adhesive, or the generic adhesive type, in end use conditions.

If the specimens are tested without using an adhesive, the test result is valid for the tested sports floor covering with and without using adhesives in end use conditions.

5.4.3 Durability aspects

Where required, textile sports floor coverings containing fire retardants shall be subjected to the laboratory spray extraction cleaning procedure according to ISO 11379 with the following modifications:

- Clean the test specimens three times, with an interval of 2 h ± 15 min between cycles, each cleaning cycle consisting of two strokes:
    - for the first stroke use the spray extraction machine with simultaneous spray and extraction;
    - for the second stroke operate the machine only as an extraction machine.
- Carry out the first cleaning cycle using the reference cleaning solution at ambient temperature (25 °C ± 10 °C) and the second and third cleaning cycle with water at ambient temperature without any addition of chemicals.

5.4.4 Classification

If a claim for reaction to fire performance is made, the sports floor covering shall be tested and classified according to the requirements of EN 13501-1 and the resulting class and subclass shall be declared.

If it is decided to make no claim for reaction to fire performance, i.e. it is decided to place a product or family of products on the market as Class F_{fl}, no testing is required for this product or family of products.

5.4.5 Product parameters influencing reaction to fire performance

The product parameters shown in Table 1 influence the reaction to fire performance of sports floor coverings and this table shall be followed if testing a range of products.

Table 1 — Product parameters influencing reaction to fire performance of indoor sports surfaces

Parameters	Comments
Composition	Each sports floor covering with different composition, build-up or surface layer shall be tested separately.
Thickness	If a sports floor covering is produced with a range of different nominal thicknesses, this shall be considered when testing. At least the minimum and maximum thickness shall be tested (one individual indicative test each) and for the worst case a complete series of tests shall be carried out. The worst case determines the classification.
Mass per unit area or density	If a sports floor covering is produced with a range of different nominal masses per unit area or densities, this shall be considered when testing. At least the minimum and maximum masses per unit area or densities shall be tested (one individual indicative test each) and for the worst case a complete series of tests shall be carried out. The worst case determines the classification.
Surface structure	If a sports floor covering is produced with several different surface structures and it is assumed that this will influence the fire performance, this shall be considered when testing. Each surface structure shall be tested (one classification each). The worst case determines the classification.
Colour and design	Colour and design of a sports floor covering have no effect on the reaction to fire behaviour unless different colours and designs change the composition or other parameters as mentioned above.

5.5 Formaldehyde emission

When formaldehyde-containing materials have been added to the product as a part of the production process, the product shall be tested and classified into one of two classes: E1 or E2, as specified in Table 2 and Table 3.

NOTE Products of Class E1 can be used without causing an indoor air concentration greater than 0,1 x 10^{-6} mg/kg (0,1 ppm) of formaldehyde.

The test requirement does not apply to sports floor coverings to which no formaldehyde-containing materials were added during production or post-production processing. These need not be classified, but may, without any testing, be declared as Class E1.

Table 2 — Formaldehyde Class E1

	Test method	Requirement
Initial type testing [a]	EN 717-1	Release ≤ 0,124 mg/m^3
Factory production control	EN 717-1	Release ≤ 0,124 mg/m^3
	EN 717-2	Release ≤ 3,5 mg/m^2h
[a] For established products, initial type testing may also be carried out on the basis of existing data with EN 717-2 testing, either from factory production control or from external inspection.		

Table 3 — Formaldehyde Class E2

	Test method	Requirement
Initial type testing	EN 717-1	Release > 0,124 mg/m^3
	EN 717-2	Release > 3,5 mg/m^{2}h to ≤ 8 mg/m^{2}h
Factory production control	EN 717-1	Release > 0,124 mg/m^3
	EN 717-2	Release > 3,5 mg/m^{2}h to ≤ 8 mg/m^{2}h

5.6 Content of pentachlorophenol (PCP) [1)]

Sports floor coverings shall not contain pentachlorophenol or a derivative thereof as a component in the production process of the product or of its raw materials. In cases where verification is required, if the content is less than 0,1 % by mass by the method described in Annex C, this requirement shall be considered to be met.

5.7 Specular reflectance

Where required, the specular reflectance shall be measured using the method described in EN 13745, using an angle of 85°, and the mean value obtained shall be reported.

5.8 Specular gloss

When tested by the method described in EN ISO 2813 using an angle of incidence of 85°, the specular gloss shall be ≤ 30 % for matt surfaces and ≤ 45 % for lacquered surfaces.

5.9 Resistance to indentation

When tested by the method described in EN 1516, the mean residual indentation measured 5 min after removal of the load shall be reported and the mean residual indentation measured 24 h after removal of the load shall be ≤ 0,5 mm.

For area-elastic sports floors, test only the upper layer supported on a rigid structure.

5.10 Resistance to impact

After conditioning for 14 day at a temperature of (50 ± 1) °C and then testing by the method described in EN 1517 at a test temperature of (10 ± 1) °C using an indenter with a mass of 800 g, there shall be no perceivable cracking, splitting, delamination or permanent indentation of the test piece, except that for wooden sports floors the indentation shall not exceed 0,5 mm.

5.11 Degree of evenness

NOTE This requirement can only be measured on site, as it is a measure of the overall construction rather than a specific property of the surfacing element alone.

When tested by the method described in EN 13036-7 over the playing area, including safety zones and out-runs, the greatest distance between the straightedge and the sports surface shall not exceed 2 mm over a measuring distance of 0,3 m and shall not exceed 6 mm over a measuring distance of 3 m.

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1) Attention is drawn to Commission Directive 1999/51/EC that covers restrictions on the marketing and use of certain dangerous substances including PCP and is reflected in national regulations.

6 Evaluation of conformity

6.1 General

The conformity of a sports floor covering with the requirements of this European Standard (including classes) shall be demonstrated by:

— initial type testing,

— factory production control by the manufacturer, including product assessment (see Annex D).

6.2 Type testing

6.2.1 Initial type testing

Initial type testing shall be performed to show conformity with this European Standard. Tests previously performed in accordance with the provisions of this European Standard (same product, same characteristic(s), test method, sampling procedure, system of attestation of conformity etc.) may be taken into account. In addition, initial type testing shall be performed at the beginning of the production of a new product type (unless a member of the same family) or at the beginning of a new method of production (where this might affect the stated properties).

If the manufacturer buys products which have already been shown (e.g. by CE marking) to meet the requirements of this European Standard, and the manufacturing process does not adversely change their performance, the assessment does not need to be repeated to demonstrate compliance with this European Standard. The sports floor manufacturer is, however, responsible for ensuring that the products he uses have the necessary level of class or performance.

For the purposes of initial type testing (and factory production control testing), products may be grouped into families (per characteristic), where it is considered that the results of testing a given characteristic for any one product are representative of all other products within that family. Different families might exist for different characteristics.

Whenever a change occurs in the product, the raw material or supplier of the components, or the production process (subject to the definition of a family), which would change significantly one or more of the characteristics, the type tests shall be repeated for the appropriate characteristic(s).

6.2.2 Sampling, testing and compliance criteria

The sample taken for testing shall be representative of the manufacturer's normal, long-term production. Compliance criteria are specified in Clauses 4 and 5.

The results of all type tests shall be recorded and held by the manufacturer for at least 10 years after the date of production of the product(s) to which they relate.

6.3 Factory production control (FPC)

The manufacturer shall establish, document and maintain an FPC system to ensure that the products placed on the market conform to the stated performance requirements. The FPC system shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product. Elements needed for the methods of FPC are given in Annex D.

7 Marking and labelling

Products which conform to the requirements of this European Standard shall be clearly and indelibly marked by the manufacturer either on an adhesive label or on their packaging with at least the following information:

a) number and the year of this European Standard, i.e. EN 14904:2006;

b) manufacturer's or supplier's identification;

c) product name and batch number (possibly in code form).

Where the requirements of ZA.3 give the same information as this clause, the requirements of this clause are considered to have been met.

Annex A
(informative)

Resistance to repeated impact of synthetic sports floors

Historically, some synthetic materials have been found to fracture following repeated impact particularly on high usage areas. A method of test is described in CEN/TS 15122 (subject to further development) that assesses the ability of a sports floor surface to resist repeated impact.

Annex B
(informative)

Shock absorption and vertical deformation types for elastic sports floors

Typical values of force reduction and vertical deformation for point-elastic sports floors (P), mixed-elastic sports floors (M), area-elastic sports floors (A) and combined-elastic sports floors (C) are given for information in Tables B.1 and B.2. The values given do not represent every possible sports floor.

Table B.1 — Force reduction (%)

Type	P	M	A	C
1	≥25 <35			
2	≥35 <45			
3	≥45	≥45 <55	≥40 <55	≥45 <55
4		≥55 <75	≥55 <75	≥55 <75

Table B.2 — Vertical deformation (mm)

Type	P	M	A	C
1	≤2,0			
2	≤3,0			
3	≤3,5	≤3,5	≥1,8 <3,5	≥1,8 <5,0 VD_p ≥0,5 <2,0 [a]
4		≤3,5	≥2,3 <5,0	≥2,3 <5,0 VD_p ≥0,5 <2,0 [a]

[a] VD_p is the vertical deformation of the point-elastic component.

Annex C
(normative)

Analysis of pentachlorophenol in sports floor coverings

C.1 General

Pentachlorophenol (PCP) in sports floor coverings shall be extracted with a potassium carbonate solution and analysed quantitatively according to EN 12673.

C.2 Reagents

C.2.1 Potassium carbonate, 1,5 g/100 ml aqueous solution

C.2.2 Other reagents, as specified in EN 12673

C.3 Apparatus

C.3.1 Vacuum filtration equipment

C.3.2 Ultrasonic bath

C.3.3 Other apparatus, as specified in EN 12673

C.4 Sampling and specimen preparation

Sampling and specimen preparation shall be carried out in accordance with ISO 1957.

C.5 Sample extraction and analysis

C.5.1 Cut the sports floor covering sample into small pieces.

C.5.2 Weigh a 5 g specimen from the sample and insert it into a 250 ml Erlenmeyer flask with 50 ml of the potassium carbonate solution (C.2.1).

C.5.3 Place the flask and contents into an ultrasonic bath for one hour to allow the PCP to be extracted as potassium salt. After extraction, filter the extract through a suction flask and extract the resulting residue a second time with a further 50 ml of potassium carbonate solution.

C.5.4 After extraction, combine the aqueous extracts (WARNING: avoid ingress of carbon dioxide) and analyse for PCP content in accordance with EN 12673.

C.6 Expression of results

Express the result as percent by mass of PCP in the sports floor covering.

Annex D
(normative)

Factory production control

D.1 General

Factory production control (FPC) means the permanent internal control of production exercised by the manufacturer. FPC shall be based on:

— control of raw material;

— process control;

— calibration plan;

— testing of finished products;

— traceability.

All elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures. This production control system documentation shall ensure a common understanding of quality assurance and enable the achievement of the required product characteristics and the effective operation of the production control system to be checked.

A manufacturer applying EN ISO 9001:2000 made specific to the requirements of this European Standard is deemed to satisfy the FPC requirements.

D.2 Control of raw material

The manufacturer shall ensure that raw and constituent materials conform to his specified requirements. In determining the checks required, consideration shall be given to the control exercised by the supplier and the documented evidence of conformity.

D.3 Process control

In order to manufacture products which conform to this European Standard, the manufacturer shall control his process and perform inspection and tests as described in the production control system documentation.

D.4 Calibration plan

Test equipment shall be calibrated and/or checked against equipment or standard materials traceable to relevant internationally or nationally recognized reference standards in accordance with a calibration plan. The minimum frequencies of calibration shall be recorded in the manufacturer's manual.

D.5 Testing of finished products

D.5.1 Direct testing

The manufacturer shall test the finished products with a frequency that will ensure that 90 % of products meet the requirements of each characteristic with a certainty of 95 %. The tests shall be carried out in accordance with the standard test methods specified in this European Standard or, in the case of indirect testing, in accordance with D.5.2.

The sample shall be drawn periodically from each production unit according to the manufacturer's test plan.

D.5.2 Indirect testing

Normally the testing is to be performed according to the test method given in this product standard. However, indirect assessment is permitted. Indirect assessment is defined as verifying a specified property X through another property Y, if there is a known relationship between these two properties for the product in question and the evidence of this relationship can be demonstrated.

For each indirect testing procedure applied at a place of production, the sampling plan and the compliance criteria for the indirect property shall be specified, taking into account the relevant relationship between the direct and indirect test methods.

D.6 Inspection and testing status of products

The inspection and testing status of the product or product family shall be identified by means which clearly indicate the conformity or non-conformity of the product or product family with regard to the inspections and tests performed.

All results of inspection, calibration and testing shall be recorded together with:

— description of the product or product family;

— date of manufacture;

— testing method;

— test result;

— signature of the person carrying out the inspection.

When products do not conform to the requirements of this European Standard, the corrective measures to be taken to rectify the situation (e.g. a further test carried out, modification of the manufacturing process, discarding or rectifying of product) shall be made in the manufacturer's log. The manufacturer’s log shall be kept for at least five years.

D.7 Traceability

It is the manufacturer’s, or the manufacturer’s agent’s, responsibility to keep full records of individual products or product batches, including their related manufacturing details and characteristics, and to keep records of to whom these products or batches were first sold. Individual products or batches of products and the related manufacturing details shall be completely identifiable and retraceable.

Annex ZA
(informative)

Clauses of this European Standard addressing provisions of the EU Construction Products Directive

ZA.1 Scope and relevant clauses

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

The clauses shown in this annex meet the requirements of the mandate given under the EU Construction Products Directive (89/106).

Compliance with these clauses confers a presumption of fitness of the construction product covered by this European Standard for its intended use(s) under the mandate; reference shall be made to the information accompanying the CE marking.

This Annex ZA has the same scope as Clause 1.

WARNING: Other requirements and other EU Directives, not affecting fitness of intended use(s), may be applicable to the construction products falling within the scope of this European Standard.

NOTE 1 In addition to any specific clauses relating to dangerous substances contained in this standard, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

NOTE 2 An informative database of European and national provisions on dangerous substances is available at the Construction web site on EUROPA (accessed through http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain.htm).

This annex establishes the conditions for the CE marking of the sports floor coverings intended for the uses indicated in Table ZA.1 and shows the relevant clauses applicable.

Table ZA.1 — Relevant characteristics for indoor sports hall floor coverings

Product: Resilient, textile and laminate sports floor coverings **Intended use:** Floor finishes for sports surfaces			
Essential characteristics	**Requirement clause in this standard**	**Mandated level and/or classes**	**Notes**
Friction	4.2	-	
Durability	5.2 and 5.3	-	
Reaction to fire	5.4	$A1_{fl}$ to F_{fl}	
Shock absorbency	4.3	-	
Release of dangerous substances	5.5, 5.6 and note 1 to ZA.1	-	

The requirement on a certain characteristic is not applicable in those Member States where there are no regulatory requirements on that characteristic for the intended end use of the product. In this case, manufacturers placing their products on the market of these Member States are not obliged to determine nor declare the performance of their products with regard to this characteristic and the option “No performance

determined" (NPD) in the information accompanying the CE marking (see ZA.3) may be used (Class F_{fl} is used instead of NPD for the characteristic reaction to fire). The NPD option may not be used, however, where the characteristic is subject to a threshold level.

ZA.2 Procedure for the attestation of conformity of products

ZA.2.1 Systems of attestation of conformity

Resilient, textile and laminate sports floor coverings for their intended uses shall follow the systems of attestation of conformity shown in Table ZA.2.

Table ZA.2 – Systems of attestation of conformity

Product	Intended use(s)	Level(s) or class(es)	Attestation of conformity system
Indoor sports hall floor coverings	Internal use as sports flooring coverings	$A1_{fl}$*, $A2_{fl}$ *, B_{fl} * and C_{fl} *	1
		$A1_{fl}$ **, $A2_{fl}$ **, B_{fl} **, C_{fl}**, D_{fl} and E_{fl}	3
*For products/materials which have been improved during the production with a fire retardant, system 1 shall always be applied. ** In all other cases where reaction to fire testing is necessary, system 3 shall be applied.			
System 1: See Directive 89/106/EEC (CPD) Annex III.2.(i), without audit testing of samples. System 3: See Directive 89/106/EEC (CPD) Annex III.2.(ii), Second possibility. System 4: See Directive 89/106/EEC (CPD) Annex III.2.(ii), Third possibility.			

The attestation of conformity of the sports floor coverings in Table ZA.1 shall be according to the evaluation of conformity procedures indicated in Table ZA.3 resulting from application of the clauses of this European Standard indicated therein.

Table ZA.3a – Assignment of evaluation of conformity tasks for sports floor coverings (for system 1)

Tasks		Content of the task	Evaluation of conformity clauses to apply
Tasks under the responsibility of the manufacturer	Factory production control (FPC)	Parameters related to all characteristics of Table ZA.1 relevant for the intended end use	**6.3**
	Further testing by the manufacturer of samples taken at factory	All characteristics of Table ZA.1 relevant for the intended end use	**6.3**
	Initial type testing by the manufacturer	All characteristics of Table ZA.1 relevant for the intended end use, except reaction to fire in the classes below	**6.2**
Tasks under the responsibility of the notified product certification body	Sampling and initial type testing	Reaction to fire in classes $A1_{fl}$*, $A2_{fl}$ *, B_{fl} * and C_{fl} *	**6.2**
	Initial inspection of factory and of FPC	Parameters related to all characteristics of Table ZA.1 relevant for the intended end use, in particular: reaction to fire in classes $A1_{fl}$ *, $A2_{fl}$ *, B_{fl} * and C_{fl}*	**6.3**
	Continuous surveillance, assessment and approval of FPC.	Parameters related to all characteristics of Table ZA.1 relevant for the intended end use, in particular: reaction to fire in classes $A1_{fl}$ *, $A2_{fl}$ *, B_{fl} * and C_{fl}*	**6.3**
*See Footnote * to Table ZA.2.			

Table ZA.3b – Assignment of evaluation of conformity tasks for sports floor coverings (for system 3)

Tasks		Content of the task	Evaluation of conformity clauses to apply
Tasks under the responsibility of the manufacturer	Factory production control (FPC)	Parameters related to all characteristics of Table ZA.1 relevant for the intended end use	**6.3**
	Sampling and initial type testing by the manufacturer	All characteristics of Table ZA.1 relevant for the intended end use, except those shown below	**6.2**
	Sampling and initial type testing by the notified test laboratory	Reaction to fire in classes $A1_{fl}$ **, $A2_{fl}$ **, B_{fl} **, C_{fl} **, D_{fl} and E_{fl}	**6.2**
**See Footnote ** to Table ZA.2.			

Table ZA.3c – Assignment of evaluation of conformity tasks for sports floor coverings (for system 4)

Tasks		Content of the task	Evaluation of conformity clauses to apply
Tasks for the manufacturer	Factory production control (FPC)	Parameters related to all characteristics of Table ZA.1 relevant for the intended end use	**6.3**
	Sampling and initial type testing	All characteristics of Table ZA.1 relevant for the intended use, i.e. release of dangerous substances, friction, shock absorbency and durability	**6.2**

ZA.2.2 Certification and declaration of conformity

ZA.2.2.1 *In the case of system 1*

When compliance with this annex is achieved, the certification body shall draw up a certificate of conformity (EC Certificate of conformity) with the information indicated below:

— name, address and identification number of the certification body;

— name and address of the manufacturer, or his authorized representative established in the EEA, and place of production;

NOTE 1 The manufacturer may also be the person responsible for placing the product onto the EEA market, if he takes responsibility for CE marking.

— description of the product (type, identification, use, ...);

— provisions to which the product conforms (i.e. Annex ZA of this EN), and a reference to the ITT report(s) and factory production control records, as appropriate;

— particular conditions applicable to the use of the product (if any);

— the number of the certificate;

— conditions of validity of the certificate, where applicable;

— name of, and position held by, the person empowered to sign the certificate;

— copy of the CE marking information.

NOTE 2 Where some of the information required for the Certificate is already given in the CE marking information, it does need to be repeated.

This EC Certificate of conformity entitles the manufacturer to affix the CE marking, as described in ZA.3.

In addition, for each product covered by an EC Certificate of conformity, the manufacturer shall draw up a declaration of conformity (EC Declaration of conformity) including the following information:

— name and address of the manufacturer, or his authorized representative established in the EEA;

— name and address of the notified body;

— number of the attached EC Certificate of conformity;

— name of, and position held by, the person empowered to sign the declaration on behalf of the manufacturer or of his authorized representative.

ZA.2.2.2 *In the case of systems 3 and 4*

When compliance with this annex is achieved, the manufacturer shall draw up a declaration of conformity (EC Declaration of conformity) including the following information:

— name and address of the manufacturer, or his authorized representative established in the EEA, and place of production;

NOTE 1 The manufacturer may also be the person responsible for placing the product onto the EEA market, if he takes responsibility for CE marking.

— description of the product (type, identification, use, ...);

— provisions to which the product conforms (i.e. Annex ZA of this EN), and a reference to the ITT report(s) and factory production control records, as appropriate;

— particular conditions applicable to the use of the product (if any);

— name and address of the notified body(ies) (test laboratory, system 3 only);

— name of, and position held by, the person empowered to sign the declaration on behalf of the manufacturer or of his authorized representative;

— copy of the CE marking information.

NOTE 2 Where some of the information required for the Declaration is already given in the CE marking information, it does need to be repeated.

This EC Declaration of conformity entitles the manufacturer to affix the CE marking, as described in ZA.3.

The above mentioned certificate and declaration shall be available in the language or languages accepted in the Member State in which the product is to be used.

ZA.3 CE Marking and labelling

The manufacturer, or his authorized representative established in the EEA, is responsible for affixing the CE marking before the product is placed on the market.

The CE conformity symbol, consisting of the letters “CE” in accordance with Directive 93/68/EEC, shall appear on the packaging, together with the number of the certificate of conformity, where applicable. The CE conformity symbol shall also appear on the accompanying commercial documents together with the following additional information:

a) the identification of the certification body (only for products subject to attestation of conformity system 1);

b) the number of this standard;

c) the description of the product and its intended underlayers (if applicable) or details of all products to be used in the flooring system (if applicable) (e.g. polyvinyl chloride sports floor covering with foam layer);

d) the name or identifying mark and address of the producer;

e) the last two digits of the year in which the marking was affixed;

f) the number of the EC certificate of conformity (only for products subject to third party certification – system 1);

g) where appropriate, indications to identify the characteristics of the product on the basis of this standard as relevant, i.e.

— reaction to fire class and subclass (with description of installation conditions, if this affects the class);

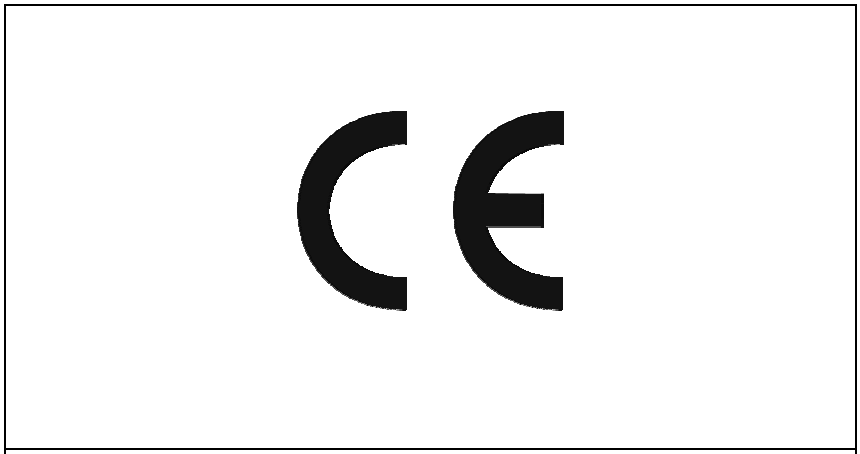
— friction;

— shock absorbency;

— formaldehyde emission (Class E1 or E2).

The NPD option shall not be used where the characteristic is subject to a threshold level. Otherwise, the NPD option may be used when and where the characteristic, for a given intended use, is not subject to regulatory requirements.

Figure ZA.1 gives an example of the information to be given on the commercial documents.



AnyCo Ltd, PO Box .....

06

EN 14904

Polyvinyl chloride floor covering with foam layer, for use in sports halls

Reaction to fire: Class E_{fl}

Friction: 90 (EN 13036-4)

Shock absorbency: 40 %

Formaldehyde emission: Class E1

Figure ZA.1 – Example of CE marking for product classified in reaction to fire Class E_{fl}

In addition to any specific information relating to dangerous substances shown above, the product should also be accompanied, when and where required and in the appropriate form, by documentation listing any other legislation on dangerous substances for which compliance is claimed, together with any information required by that legislation.

NOTE European legislation without national derogations need not be mentioned.

Bibliography

[1] CEN/TS 15122, *Surfaces for sports areas — Determination of resistance of synthetic sports surfaces to repeated impact*

[2] EN ISO 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

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