SLOVENSKI STANDARD
SIST EN 14974:2006+A1:2010

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Naprave za poligon za rolanje - Varnostne zahteve in preskusne metode (vključno z dopolnilom A1)

Facilities for users of roller sports equipment - Safety requirements and test methods

Anlagen für Benutzer von Rollsportgeräten - Sicherheitstechnische Anforderungen und Prüfverfahren

Installations pour utilisateurs de sports à roulettes et BMX (vélos bicross) - Exigences de sécurité et méthodes d'essai

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Anlagen für Benutzer von Rollsportgeräten - Sicherheitstechnische Anforderungen und Prüfverfahren

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

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Foreword

This document (EN 14974:2006+A1:2010) has been prepared by Technical Committee CEN/TC 136 “Sports, playground and other recreational ⟦A1⟩ facilities and ⟨A1⟧ equipment”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by January 2011, and conflicting national standards shall be withdrawn at the latest by January 2011.

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This document supersedes EN 14974:2006.

This document includes Amendment 1 approved by CEN on 2010-06-12.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟦A1⟩ ⟨A1⟧.

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Introduction

The use of facilities for users of roller sports equipment is connected with sporting risks. Sporting skills and the use of appropriate protective equipment essentially reduces the risk of accident.

It is not the intention of this standard to specify every possible shape and construction of facilities for users of roller sports equipment.

For supervised practices, facilities for users of roller sports equipment (competitions, demonstrations, training and initiation) having different dimensions and thus also increased risks, are also acceptable within the frame of legal provisions (e.g. regional building regulations).

The development of facilities for users of roller sports equipment is in constant evolution, therefore, some specific structures are not considered in this European Standard. For all such structures the general requirements apply.

This European Standard does not specify specific requirements for combinations.

1 Scope

This standard applies to facilities for users of inline-skates, roller skates, skateboards or similar roller sports equipment, as well as BMX cycles (hereinafter referred to as facility/facilities).

It specifies general and specific requirements and test methods for facilities used in unsupervised areas.

The purpose of this European Standard is to specify the safety requirements, which to a large extent protect users and third parties (e.g. spectators) from hazards when using a facility as intended or as can be reasonably expected.

[A1] This European Standard is not be applicable for bike-parcours (e.g. dirt tracks). [A1]

2 Normative references

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

EN 59, *Glass reinforced plastics — Measurement of hardness by means of a Barcol impressor*

EN 206-1, *Concrete — Part 1: Specification, performance, production and conformity*

[A1] EN 300:2006 [A1], *Oriented Strand Boards (OSB) — Definitions, classification and specifications*

EN 301, *Adhesives, phenolic and aminoplastic, for load-bearing timber structures — Classification and performance requirements*

EN 312, *Particleboards — Specifications*

[A1] EN 335-1:2006, *Durability of wood and wood-based products — Definition of use classes — Part 1: General* [A1]

EN 338:2003, *Structural timber — Strength classes*

EN 351-1, *Durability of wood and wood-based products — Preservative-treated solid wood — Part 1: Classification of preservative penetration and retention*

EN 599-1, [A1] *Durability of wood and wood-based products — Efficacy of preventive wood preservatives as determined by biological tests — Part 1: Specification according to use class* [A1]

EN 636, *Plywood — Specifications*

EN 789, *Timber structures — Test methods — Determination of mechanical properties of wood based panels*

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

EN ISO 12944-5, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 5: Protective paint systems* [A1] *(ISO 12944-5:2007)* [A1]

[A1] CEN/TS, 1099 *Plywood — Biological durability — Guidance for the assessment of plywood for use in different use classes* [A1]

3 Terms and definitions

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

3.1
facility for users of roller sports equipment
structure and necessary area designated for users of roller sports equipment including inline-skates, roller skates, skateboards or similar roller sports equipment, as well as BMX cycles

3.2
structure
sports equipment having a solid surface on which the user of skateboards, roller skates, inline skates or similar roller sports equipment as well as BMX cycles can manoeuvre freely

3.3
ramp
structure incorporating one or more transitions and/or banks

3.4
transition
curved part of the riding surface

3.5
riding surface
part of the structure intended for grinding, sliding and rolling

3.5.1
rolling surface
part of the structure intended for rolling

3.5.2
grinding surface
part of the structure intended for grinding and sliding

3.6
extension
raised, horizontal portion of the platform which permits continuation of the rolling surface passed the lower portion of the platform

3.7
vert
vertical part of the rolling surface at the top of transition

3.8
coping
circular tube or section of a circular tube, which is firmly attached to the top of the riding surface

3.9
safety zone
space around a structure necessary for the safety of the user as well as third parties

3.10
run-up zone
space which is required to access a structure on roller sports equipment

3.11
free-fall height
vertical distance between the supporting surfaces and an adjoining horizontal surface located at a lower level

NOTE Supporting surfaces are horizontal riding surfaces and surfaces intended for standing. Exceptions are described in relevant sub-clauses of Clause 5.

3.12
platform
horizontal surface on a structure provided with a barrier

3.13
run-out zone
space required to exit a structure on roller sports equipment

3.14
foot
part of the rolling surface located at a junction with the ground

3.15
barrier
construction which prevents the user and/or roller sports equipment from falling from a height

3.16
table
horizontal surface on a structure without a barrier

3.17
bank
straight inclined part of the riding surface

3.18
table edge
part of the rolling surface located at a junction with the table

3.19
board
optional vertical wall located along the lateral edges of the rolling surface on a pipe

3.20
fastening
mechanical load bearing component joining materials, parts and structures to withstand extreme vibrations and extreme temperatures

4 Material

4.1 General

The materials shall be selected in such a manner that the construction of a structure of any element manufactured from these materials meets the requirements of this standard.

Indoor structures shall comply with current Fire safety regulations.

The requirements in 4.2 and 4.3 relating to resistance to weather conditions may be neglected if the facility is installed in indoor or covered areas.

No substance that can adversely affect health shall be present in the facility.

NOTE The restrictions on the marketing and use of certain dangerous substances and preparations are ruled by Regulation (EC) No 1907/2006.

4.2 Timber and associated products

4.2.1 General

Building elements made of wood which touch the ground, shall be protected against rotting.

NOTE When selecting metal fastenings, consideration should be given to the species of timber and chemical treatments used, as some will accelerate corrosion of certain metals if there is contact.

Timber components shall be designed so that rain shall drain or drop freely from the structure.

4.2.2 Solid wood

If it is in contact with the ground, solid wood shall meet the biological attack requirements of hazard class 4 according to [A1] EN 335-1:2006 [A1], or of hazard class 3, if it is at least over 200 mm from the ground. This natural or conferred durability of solid wood shall meet the levels required by EN 351-1 and EN 599-1.

For structural use solid wood shall be of at least class C 24 according to EN 338:2003.

4.2.3 Laminated wood

Laminated wood shall comply with the requirements of hazard class 2 for indoor use and of hazard class 3 for outdoor use in accordance with [A1] EN 335-1:2006 [A1]. Laminate wood shall be of structural quality with bondings taking into account the intended indoor or outdoor use.

4.2.4 Plywood panel

Plywood panels shall meet the biological attack requirements of hazard class 2 for indoor use and of hazard class 3 for outdoor use according to [A1] EN 335-1:2006 [A1] and [A1] CEN/TS 1099 [A1].

For structural use and climatic resistance, the requirements for structural panels according to EN 636 shall be met. The longitudinal modulus of elasticity and shear stress (mean value in each direction) and bending compressive and shear strength (characteristic value in each direction), shall be specified according to EN 789.

4.2.5 Oriented strand boards

Oriented strand boards shall meet the biological attack requirements of hazard class 2 for indoor use according to [A1] EN 335-1:2006 [A1].

For structural use the requirements of class OSB 4 are to be met according to [A1] EN 300:2006 [A1]. In addition its mechanical properties, measured in accordance with EN 789, shall be defined.

4.2.6 Particle boards (chipboards)

Particle boards shall only be used for indoor facilities. They shall meet the biological attack requirements of hazard class 2 according to [A1] EN 335-1:2006 [A1].

For structural use particle boards shall comply with EN 312.

4.3 Metals

Metal components shall be resistant to weathering under atmospheric conditions. See also EN ISO 12944-5.

4.4 Polymer-based composites

When conducting the tests in accordance with EN ISO 5470-1, the layer situated beneath the gelcoat shall not be visible. The thickness of the gelcoat shall be at least 0,3 mm.

When conducting tests in accordance with EN 59, all types of polymer surfaces shall meet a Barcol hardness level equal to at least 40.

If, during the course of maintenance it is difficult to determine when the material becomes brittle, the manufacturers shall indicate a period of time after which the part or equipment should be replaced.

4.5 Concrete

4.5.1 Concrete mix and reinforcement shall comply with EN 206-1.

4.5.2 Concrete used for riding surfaces and foundations shall be at least in accordance with Table 1.

Table 1 — Types of concrete to be used

Concrete used for	Application area	Type of concrete
Riding surfaces	Outdoor	C 35/45
Riding surfaces	Indoor	C 25/30
Foundations	Outdoor and indoor	C 16/20

4.6 Other materials

The use of other materials is acceptable provided their suitability has been sufficiently proven by the supplier and/or manufacturer.

4.7 Fastenings

4.7.1 General

The complete fastening system shall be protected against corrosion.

NOTE This protection can be achieved for example, by galvanising or equivalent procedures.

4.7.2 Bonding

Glues used shall comply with the requirements of EN 301. They shall be chosen as a function of the environment in which the construction is installed.

4.7.3 Metal fastenings

[A1] Retainer clips [A1] tacks and nails shall not be used.

5 Safety requirements

5.1 General requirements

5.1.1 General

5.1.1.1 Where facilities for users of roller sports equipment are erected in combination with playgrounds, sports grounds, holiday parks and similar establishments, they have to be physically separated by [A1] an appropriate distance, so that no risk through user and out-of-control sports equipment occurs to third parties [A1].

[A1] NOTE This can be achieved by constructional measures. [A1]

5.1.1.2 All external accessible edges shall be chamfered with a radius of at least 3 mm.

5.1.1.3 The difference between the levels of the ground (see 5.1.2.2) and of the foot shall not exceed 5 mm measured from the top of the foot.

5.1.1.4 It shall not be possible to dismantle structures without tools.

5.1.1.5 Structures shall be screwed together or be securely joined by other means, or fixed to the ground to prevent displacement.