



SLOVENSKI STANDARD
SIST EN 13899:2003
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Roller sports equipment - Roller skates - Safety requirements and test methods

Rollsportgeräte - Rollschuhe - Sicherheitstechnische Anforderungen und Prüfverfahren

Equipements de sport a roulettes - Patins a roulettes - Exigences de sécurité et
méthodes d'essai

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English version

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Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 29 November 2002.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This document (EN 13899:2003) has been prepared by Technical Committee CEN /TC 136 "Sports, playground and other recreational 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of an identical text or by endorsement, at the latest by August 2003, and conflicting national standards shall be withdrawn at the latest by August 2003.

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

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Introduction

Requirements for roller skates from the orthopedic point of view such as lateral support or similar were not included in this standard because these requirements differ from user to user and therefore cannot be covered by a standard.

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1 Scope

This standard applies to roller skates intended for users with a body mass of more than 20 kg and less than 100 kg.

This standard specifies safety requirements for roller skates, specifications for test methods, marking and information supplied by the manufacturer to reduce the risk of injuries to both third parties and the user during their normal use.

Roller skates for use by a user of less than 20 kg do not belong to the scope of this European Standard. They are toys.

This standard does not apply to inline-skates according to EN 13843.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 22768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1:1989)*.

ISO 4649:2002, *Rubber, vulcanized or thermoplastic - Determination of abrasion resistance using a rotating cylindrical drum device*.

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3 Terms and definitions

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

3.1

roller skate

roller sports equipment whose chassis has axles, one behind the other with the pair of wheels on each. It can be attached

- a) to the users boot or shoe by means of straps
- b) as an integrated part of a boot or shoe
- c) as a detachable chassis of a purpose built boot or shoe

3.2

binding element

element for the attachment of the roller skate to the user's foot or shoe

[EN 13843:2003, definition 3.2]

4 Requirements

4.1 General

General tolerances: EN 22768-1.

4.2 Classification of roller skates

4.2.1 Class A

Roller skates intended for use by a user mass of more than 20 kg up to 100 kg.

They are provided with

- binding elements;
- roller bearings;
- steering facilities or without them.

4.2.2 Class B

Roller skates intended for use by a user mass of more than 20 kg up to 60 kg and a length of the foot of no more than 260 mm.

They are provided with

- binding elements;
- steering facilities and plain or roller bearings;
- a size adjustment.

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4.3 Safety requirements

4.3.1 Protruding parts and edges

During the test in 5.3.2, protruding parts such as screws or lever ends shall not touch the outside of the test cylinder if they protrude by more than 10 mm with less than 100 mm² cross-sectional area, and are not shielded in all directions by an adjacent surface of equal height, whose distance is not more than 25 mm from the end of the protruding part.

All edges on the roller skate which can come into contact with parts of the body during normal use shall be rendered safe, or shaped so that injuries cannot occur.

Testing in accordance with 5.3.3.

4.3.2 Binding elements

Bindings elements shall prevent unintentional detachment of the roller skate from the shoe even under load.

Compliance with this requirements is accepted when no breakage, disconnection, loosening or detachment occurs in roller skates with permanent binding to the shoe during the test in 5.3.7.2, and in roller skates with detachable binding to the shoe during the test in 5.3.7.1. The roller skate bindings and any bracing shall not break during the bending test in 5.4.1.

4.3.3 Displacement safety

The safety locking or fastening elements shall not become detached or loose. Compliance with this requirement is accepted when the locking or fastening elements do not become detached or loose, and do not break after a frontal collision as in 5.3.8 and after endurance testing as in 5.3.10.

4.3.4 Connecting fillet

The connecting fillet on the heel of the roller skate shall withstand load encountered.

Compliance with this requirement is accepted when, after the tests in

- 5.3.8 and 5.3.10, the connecting fillet is neither broken nor is there any apparent permanent deformation,
- 5.4.2, the reduction in ground clearance in the centre is not more than 5 % between the axles.

4.3.5 Starting and/or braking device

The starting and/or braking device shall be designed so that it is strong and secured against unscrewing.

Compliance with this requirement is accepted when,

- a) after the test in 5.3.9, the starting and/or braking device is neither loosened, deformed, detached nor showing other signs of functional damage;
- b) no unscrewing of the starting and/or braking device is found during the test in 5.3.5.

The clearance between the bottom edge of the starting and/or braking device and the ground shall not be less than 10 mm.

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4.3.6 Rolling gear

During operation, the rolling gear shall withstand shock loading, continuous loading and static loading. It shall be securely fastened to the shoe plate and secured against unintentional detachment.

Compliance with technical safety requirements is accepted when no parts have become loose or detached and there is no impairment of serviceability following the tests in 5.3.8, 5.3.10 and 5.4.2.

4.3.7 Axles

The axles shall be designed and fitted so that in operation no axles can become loose, displaced or deformed. The wheels shall be secured on the axles against unintentional detachment. Compliance with these requirements is accepted when, after the tests in 5.3.8, 5.3.10 and 5.4.2, no axle becomes loose, displaced or so deformed as to impair serviceability, and the rollers secured to the axles have not become detached.

The rolling gear axles including associated components may only protrude by no more than 3 mm beyond the outer edges of the wheels, when their ends are rounded with a radius of at least 5 mm.

4.3.8 Wheels

The wheels shall be made of slip-resistant material. Compliance with this requirement is accepted when the following coefficients of friction μ_0 are obtained during the test in accordance with 5.3.5.

- Class A: min 0,30
- Class B: min 0,20

Following the endurance test in 5.3.10, the wheel shall not have loosened on the bearings to the extent that there is a danger of it sliding off the bearings, or shown other signs of functional damage.