



SLOVENSKI STANDARD
SIST EN 13613:2009

01-julij-2009

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SIST EN 13613:2002

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Roller sports equipment - Skateboards - Safety requirements and tests methods

Rollsportgeräte - Skateboards - Sicherheitstechnische Anforderungen und Prüfverfahren

iTeh STANDARD PREVIEW
Equipement de sports à roulettes - Planches à roulettes - Exigences de sécurité et méthodes d'essai
(standards.iteh.ai)

Ta slovenski standard je istoveten z: EN 13613:2009
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ICS:

97.220.40	Oprema za športe na prostem in vodne športe	Outdoor and water sports equipment
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SIST EN 13613:2009

en,fr,de

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EUROPEAN STANDARD

EN 13613

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2009

ICS 97.220.40

Supersedes EN 13613:2001

English Version

**Roller sports equipment - Skateboards - Safety requirements
and tests methods**Équipement de sports à roulettes - Planches à roulettes -
Exigences de sécurité et méthodes d'essaiRollsportgeräte - Skateboards - Sicherheitstechnische
Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 5 March 2009.

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

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 13613:2009) 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 October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13613:2001.

Annex A is informative.

In relation to EN 13613:2001, the following main changes have been introduced:

- a) classification in 4.1 modified;
- b) velocity in 6.7.2 and 6.10.2 changed;
- c) marking in Clause 7 d) and e) modified;
- d) service and maintenance in 8.3 a) and f) modified;
- e) WARNING in 8.4 modified.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, 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 the United Kingdom.

EN 13613:2009 (E)**1 Scope**

This standard specifies requirements for non-motorized skateboards which are supplied for use by one rider at a time.

The skateboards covered by this standard are graded by performance criteria for different categories of body weight.

This standard is not applicable for skateboards for use by a rider up to 20 kg. EN 71-1 is applicable for those.

This standard does not apply to individual components.

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

3 Terms and definitions

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

3.1 skateboard
fully assembled and useable sports equipment consisting of one deck on two trucks and wheels on which the rider can propel him/herself and which can be steered by shifting his/her body mass

3.2 mid-steering setting
setting between the positions of the softest and hardest steering settings

3.3 softest steering setting
setting achieved when for example an action bolt (Kingpin) is unscrewed so that the cushion is just relieved of any pressure from it

3.4 hardest steering setting
setting achieved when for example an action bolt (Kingpin) is fully tightened so that the cushion is subjected to maximum pressure from it

4 Classification**4.1 Class A**

Skateboards intended for use by a rider of more than 20 kg up to 100 kg mass.

4.2 Class B

Skateboards intended for use by a rider of more than 20 kg up to 50 kg.

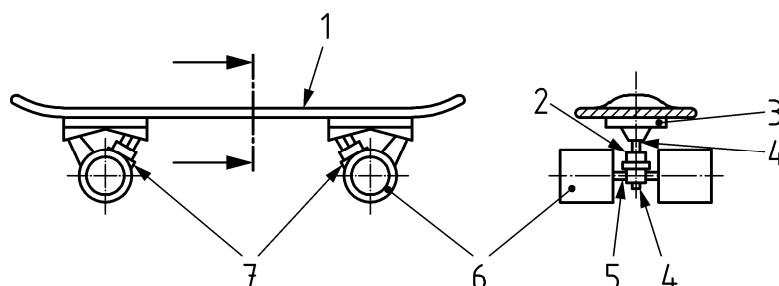
5 Construction

5.1 General

Typical components of a skateboard are illustrated in Figure 1.

NOTE Figure 1 is only an example for reference.

General tolerances: EN 22768-v.



Key

- 1 Deck
- 2 Cushion
- 3 Riser pad
- 4 Action bolt (Kingpin)
- 5 Axle
- 6 Wheels
- 7 Trucks

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Figure 1 — Components of a skateboard

5.2 Requirements

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5.2.1 There shall be no projections above the upper surface of the deck. The complete upper surface of the deck shall be equipped with an anti-slide surface.

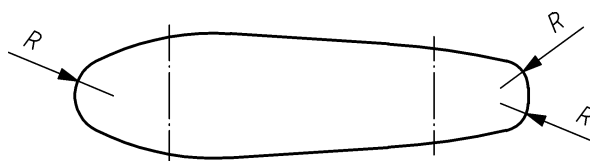
5.2.2 When tested in accordance with 6.8, it shall not be possible to touch, with the test cylinder (see 6.8.2), any projection which has a length greater than 10 mm and less than 100 mm² in area.

5.2.3 When the action bolt (kingpin) of the truck is fully tightened, no part of the action bolt shall be in contact with the underside of the deck.

5.2.4 If a part of the axles and means of securing the wheels shall project beyond the outer edge of the wheels than the axle and means of securing the wheels shall not project beyond the deck.

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

5.2.5 The corners and edges of the deck shall be rounded off and free from burr and sharp or protruding edges. The outlines of the deck shall be rounded off with a minimum radius of 10 mm as shown in Figure 2.



Key

R ≥ 10 mm

Figure 2 — Radius of edges of deck

EN 13613:2009 (E)

5.2.6 Where self-locking nuts are used, the entire thread, including the locking section, shall be in contact with the bolt. Self-locking nuts and other self-locking fixings that are loosened several times for the purpose of modification or servicing, shall be suitable for this purpose. The information supplied by the manufacturer shall indicate if self-locking nuts and other self-locking elements can lose their effectiveness.

5.2.7 When tested in accordance with 6.5, the coefficient of adhesion (μ_0) of the wheels shall be a minimum of 0,3.

5.2.8 When tested in accordance with 6.6, the wheel bearings shall not get stuck or disintegrate.

5.2.9 When tested in accordance with 6.7, 6.9 and 6.10 no part of the skateboard shall break, there shall be no signs of functional damage and no fastening devices shall have worked loose.

6 Test methods**6.1 General**

All tests shall be carried out on fully assembled skateboards at the mid-steering setting.

6.2 Test specimens

Two skateboards of the same type shall be tested in accordance with the order described in 6.3.

6.3 Order of testing

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6.3.1 Specimen 1

The specimen shall be subjected to the test in the following order:
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- a) wheel adhesion test (see 6.5);
- b) speed test (see 6.6);
- c) endurance test (see 6.7).

6.3.2 Specimen 2

The specimen shall be subjected to the test in the following order:

- a) test of external design (see 6.8);
- b) drop test (see 6.9);
- c) impact test (see 6.10).

6.4 Conditioning and testing temperatures

Unless otherwise specified the skateboards shall be conditioned and tested either at a temperature of $(23 \pm 2)^\circ\text{C}$ and a relative humidity of $(50 \pm 5)\%$ or at a temperature of $(20 \pm 2)^\circ\text{C}$ and a relative humidity of $(65 \pm 5)\%$.

6.5 Wheel adhesion test

6.5.1 Principle

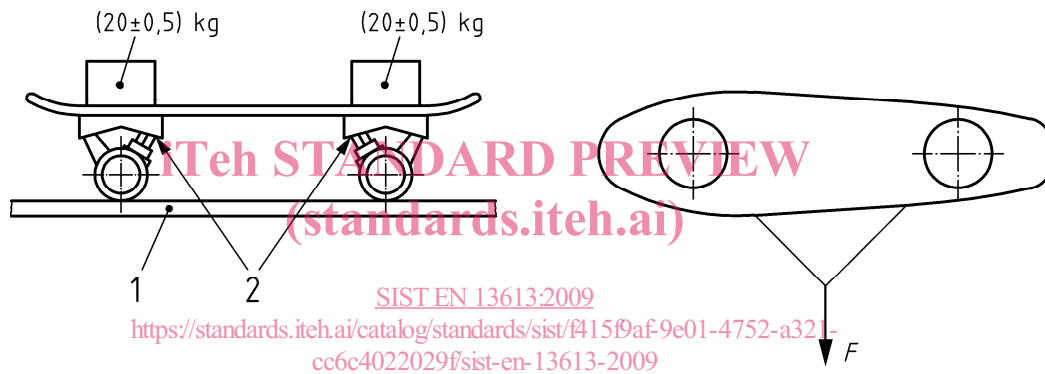
The wheel adhesion is tested by pulling a wheel along a steel plate with a fine brushed and degreased surface of arithmetical mean roughness R_a of 1,5 μm to 2,0 μm .

6.5.2 Apparatus

Steel plate, with a parallel lay and surface texture between $R_a = 1,5 \mu\text{m}$ and $R_a = 2,0 \mu\text{m}$ and two weights, each of $(20 \pm 0,5)$ kg mass.

6.5.3 Procedure

Degrease the tyre surface of the wheels of the skateboard and the steel plate. Measure the mass of the skateboard. Load the skateboard with a mass of $(20 \pm 0,5)$ kg over each axle and place it on the steel plate so that the lay is perpendicular to the force F to be applied. Apply force without shock to the trucks (see Figure 3) and when the wheels are at the point of slipping, measure the applied force F .



Key

- 1 Steel plate
- 2 Point of application of force

Figure 3 — Adhesion test apparatus

6.5.4 Calculation of results

Calculate the coefficient of adhesion of the wheels μ_0 from Equation (1):

$$\mu_0 = \frac{F}{(40 + m) \times g} \quad (1)$$

where

- F is the force applied, in newtons;
- m is the mass of the skateboard, in kilograms;
- g is the acceleration due to gravity, i.e. 9,81 m/s^2 .