



SLOVENSKI STANDARD

SIST EN 1569:2020

01-julij-2020

Nadomešča:
SIST EN 1569:2002

Podloge za športne dejavnosti - Ugotavljanje obnašanja pri kotalni obremenitvi

Surfaces for sports areas - Determination of the behaviour under a rolling load

Sportböden - Bestimmung des Verhaltens bei rollender Last

Sols sportifs - Détermination du comportement sous charge roulante
(standards.itech.ai)

Ta slovenski standard je istoveten z: EN 1569:2020

<https://standards.itech.ai/catalog/standards/sist/9fd5dfb-7aa8-4a97-a6a3-05505cc8bbb7/sist-en-1569-2020>

ICS:

97.220.10 Športni objekti Sports facilities

SIST EN 1569:2020

en,fr,de

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EUROPEAN STANDARD

EN 1569

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2020

ICS 97.220.10

Supersedes EN 1569:1999

English Version

Surfaces for sports areas - Determination of the behaviour under a rolling load

Sols sportifs - Détermination du comportement sous
charge roulante

Sportböden - Bestimmung des Verhaltens bei rollender
Last

This European Standard was approved by CEN on 2 March 2020.

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

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 1569:2020) has been prepared by Technical Committee CEN/TC 217 “Surfaces for sports areas”, the secretariat of which is held by AFNOR.

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 November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

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

This document supersedes EN 1569:1999.

The main change compared to the previous edition is an enhanced equipment description to improve the reproducibility of the test, including:

- guide tracks to ensure the test wheel always passes over the same area,
- use of a metronome or similar to set the pace of movement or mechanical means such as an automated drive system.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 1569:2020 (E)

1 Scope

This document specifies a method of test for the determination of behaviour under a rolling load of certain surfaces for sports areas. It is suitable for tests undertaken in the laboratory and on site.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp/ui>

4 Principle

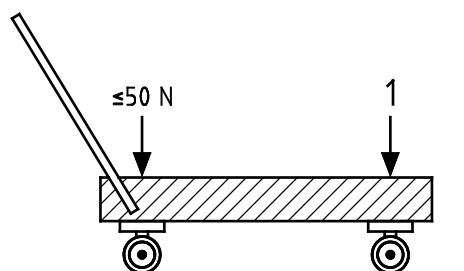
The behaviour under a rolling-load is determined by stressing the critical area, e.g. joints, welded joints, etc. of an indoor sports surface by the repeated traversing of a loaded wheel and observing any resulting damage.

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5 Apparatus

5.1 Loaded wheel apparatus.

NOTE The apparatus is shown schematically in Figure 1.



Key

- 1 load

Figure 1 — Schematic illustration of the loaded wheel apparatus

5.2 A steel test wheel, of diameter (100 ± 1) mm and width $(30,0 \pm 0,3)$ mm with the edges rounded to a radius of $(1 \pm 0,1)$ mm.

5.3 A rigid plate, for example of steel or timber, of minimum thickness 50 mm, with two supporting wheels, in addition to the test wheel.

5.4 A means of moving the apparatus backwards and forwards over the test specimen at a velocity of approximately 1 m/s. This may be achieved by manual movement using a metronome or similar to set the pace of movement or by mechanical means such as an automated drive system.

5.5 Weights, positioned such that the centre of gravity of the apparatus is directly over the axle of the test wheel. The test wheel is loaded with a force as given in the product specification or as agreed between the interested parties. The load on the supporting wheels is not greater than 50 N.

5.6 Two guide tracks at least 5 mm high by 700 mm long that can be temporarily, but securely, mounted (e.g. using double-sided adhesive tape) 50 mm apart to the test specimen to ensure the test wheel always passes over the same area.

If an automated test rig is used where the sample trolley is moved mechanically the test tracks are not required.

5.7 A means of measuring residual indentation to $\pm 0,1$ mm.

6 Test specimen

Prepare a specimen of surface of minimum length 1 500 mm and minimum width 1 500 mm, in combination with the supporting layers with which it is to be used in service, using the recommended method of attachment in accordance with the manufacturer's instructions.

7 Conditioning

Condition the test specimen for a minimum of 3 h at a temperature of (23 ± 2) °C.

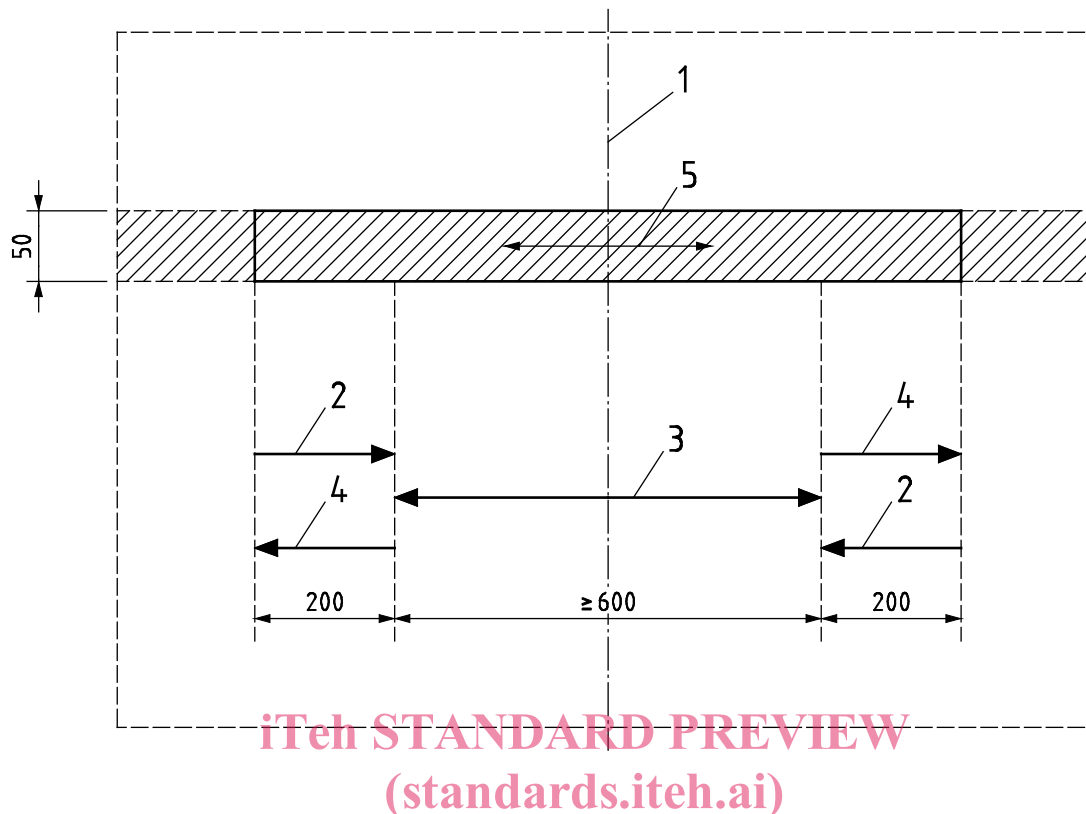
NOTE If required, tests can be carried out under the prevailing site conditions.

8 Procedure

Attach the guide tracks along the critical area of the test piece so they are 50 mm + 0/-5 mm apart and at least 100 mm from the edge of the test specimen.

Locate the test wheel within the guide tracks and roll the apparatus forwards and back over the critical areas of the test piece at a velocity of approximately 1 m/s within a test strip of 50 mm width 300 times as illustrated in Figure 2.

Dimensions in millimetres

**Key**

- 1 load
- 2 acceleration
- 3 velocity 1 m/s
- 4 deceleration
- 5 testing strip

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Figure 2 — Plan of test specimen crossings

Repeat the procedure at 90° to the first test strip, ensuring a new area of the test specimen that has not been subjected to the rolling load in the first series of tests is used.

Care should be taken to ensure that the apparatus does not become unbalanced, as this may cause damage to the surface.

Examine the stressed area of the surface by the naked eye and, if required, by means of a microscope and note any cracking or other damage and any indentation greater than 0,5 mm. If such indentation exists, measure its depth after a recovery time of between 15 min and 20 min after completion of the tracking procedure.

NOTE The surface can be flexed or cut to aid detection of damage.

9 Expression of results

Report any cracking or other damage and the depth of any residual indentation in millimetres.