



SLOVENSKI STANDARD

SIST-TS CEN/TS 15122:2005

01-november-2005

Določitev upornosti sintetičnih športnih površin pred ponovnimi udarci

Surfaces for sports areas - Determination of resistance of synthetic sports surfaces to repeated impact

Sportböden - Bestimmung des Widerstandes von Kunststoffbelägen für Sportböden gegen wiederholte Stöße

Sols sportifs - Détermination de la résistance des sols sportifs synthétiques aux impacts répétés

Ta slovenski standard je istoveten z: CEN/TS 15122:2005

ICS:

| | | |
|-----------|--------------------------|-----------------------------|
| 97.150 | Netekstilne talne obloge | Non-textile floor coverings |
| 97.220.10 | Športni objekti | Sports facilities |

SIST-TS CEN/TS 15122:2005 en

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 15122

July 2005

ICS 97.150; 97.220.10

English version

**Surfaces for sports areas - Determination of resistance of
synthetic sports surfaces to repeated impact**

Sols sportifs - Détermination de la résistance des sols
sportifs synthétiques aux impacts répétés

Sportböden - Bestimmung des Widerstandes von
Kunststoffbelägen für Sportböden gegen wiederholte Stöße

This Technical Specification (CEN/TS) was approved by CEN on 18 April 2005 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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

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Foreword

This document (CEN/TS 15122:2005) has been prepared by Technical Committee CEN/TC 217 “Surfaces for sports areas”, the secretariat of which is held by BSI.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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CEN/TS 15122:2005 (E)

1 Scope

This Technical Specification describes a method for the determination of the resistance of a synthetic sports surface to repeated impacts.

2 Principle

A test piece taken from a synthetic sports surface is submitted to a number of impacts from an impacter fitted with studs, after which the surface is examined for surface defects.

3 Apparatus

Impact machine (see Figure 1) comprising a motor which drives, by means of a handle, a swinging arm, at the end of which is fitted an impacter (see Figure 2), fitted with three studs, arranged as shown in Figure 3. The studs shall have a length of $(12,5 \pm 1,0)$ mm and a diameter of $(12,7 \pm 1,0)$ mm and be made of hard plastics having a Shore A hardness of at least 95 °, e.g. polyamide.

The movement of the swinging arm shall be controlled by a connecting rod, the length of which shall be adjusted so that the low point of the handle corresponds to the swinging arm being in the vertical position.

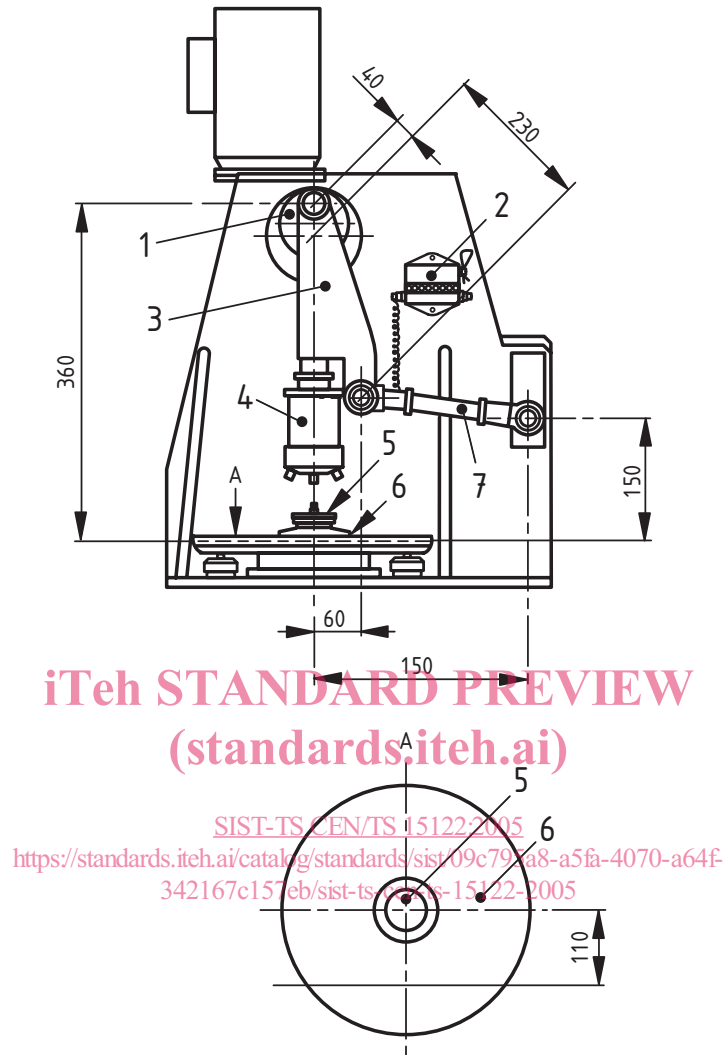
The impacter shall be positioned so that it comes into contact with the test piece when this is placed on the rotating plate. A holder shall be provided to hold the test piece in position on the rotating plate.

NOTE Movement of the impacter causes rotational movement of the test piece.

Means shall be provided to count the number of strikes made by the impacter and the number of revolutions of the rotating plate.

The impacter shall contain a spring which can be compressed by a screw to adjust the force exerted on the test piece (see Figure 2). Means shall be provided to measure the force applied to the test piece by the impacter.

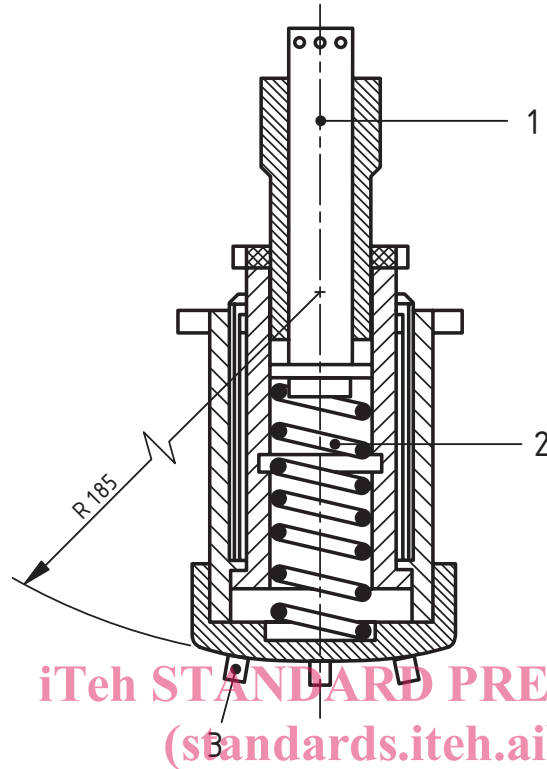
Dimensions in millimetres

**Key**

- 1 Handle
- 2 Counter
- 3 Swinging arm
- 4 Impacter
- 5 Test piece holder
- 6 Test piece
- 7 Connecting rod

Figure 1 — Impact machine

Dimensions in millimetres

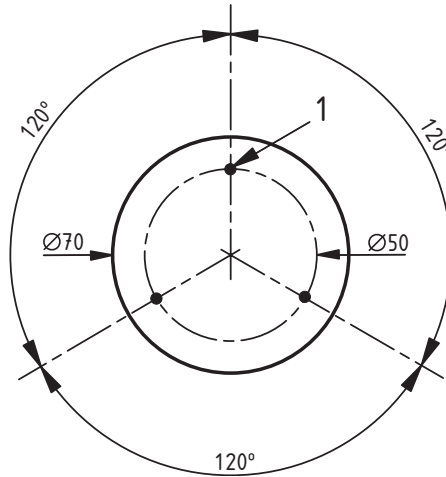
**Key**

- 1 Pressure ram
- 2 Spring
- 3 Stud

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Figure 2 — Impacter

Dimensions in millimetres

**Key**

1 Stud

Figure 3 — Position of studs on the impactor**4 Test piece**

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Three circular test pieces shall be taken from the material to be tested, having a diameter no greater than (300 ± 2) mm with a concentric hole in the centre having a diameter of (135 ± 2) mm.

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5 Conditioning

Condition the test pieces for 24 h at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) %.

6 Procedure

Measure the thickness of one of the test pieces. Attach the test piece to the test piece holder, e.g. by using double-sided adhesive tape. Weigh the test piece together with the test piece holder. Place the test piece holder on the rotating plate. Adjust the impactor so that it exerts a force of (711 ± 10) N on the test piece. Start the impact machine and adjust it so that the impactor strikes the test piece $(6\,000 \pm 100)$ times per hour. Run the machine until the test piece has been impacted 40 000 times, stopping it periodically, e.g. approximately every 6 000 impacts, to inspect the test piece for visible cracks. If visible cracks appear, terminate the test. Record the number of impacts up to the point where the cracks appeared, if appropriate. If no cracks appeared, record the figure 40 000.

Re-weigh the test piece together with the test piece holder. Remove the test piece from the holder and re-measure its thickness. Calculate any loss in mass and any reduction in thickness.

Repeat the procedure using the remaining two test pieces.