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## **EUROPEAN STANDARD**

## EN 12234

# NORME EUROPÉENNE EUROPÄISCHE NORM

September 2013

ICS 97.220.10

Supersedes EN 12234:2002

#### **English Version**

## Surfaces for sports areas - Determination of ball roll behaviour

Sols sportifs - Détermination du comportement de la balle en roulement Sportböden - Bestimmung des Ballrollverhaltens

This European Standard was approved by CEN on 11 July 2013.

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.

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

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## Contents

Scope Normative references Principle Apparatus	4 4
Normative references  Principle	4
Principle	
	4
Apparatus	
Test report	7
To other seasons of the seasons of t	
	Preparation of the test specimen  Conditioning  Procedure  Calculation and expression of results  Test report

#### **Foreword**

This document (EN 12234:2013) 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of an identical text or by endorsement, at the latest by March 2014, and conflicting national standards shall be withdrawn at the latest by March 2014.

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 12234:2002.

Compared with EN 12234:2002, the text has been clarified and editorial errors have been corrected.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, ia, L pwitzerla Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies a method for determining the rolling behaviour of a ball on a sports surface.

#### 2 Normative references

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

EN 12229, Surfaces for sports areas — Procedure for the preparation of synthetic turf and needle-punch test pieces

EN 12235, Surfaces for sports areas — Determination of vertical ball behaviour

## 3 Principle

A ball is rolled down a ramp, from a specified height, onto a test surface and either the distance the ball rolls or the velocity change of the ball on the surface is measured.

## 4 Apparatus

- **4.1 Ball**, conforming to the regulations of the governing body of the relevant sport and as described in EN 12235.
- **4.2 Ball roll ramp**, comprising two smooth parallel bars, mounted at an angle of  $(45 \pm 2)^{\circ}$  on a rigid frame, and having dimensions in accordance with Figures 1 and 2.

At their lower end, the bars curve to become parallel with the ground.

NOTE The spacing between the parallel bars depends on the diameter of the ball used in the test.

Dimensions in millimetres

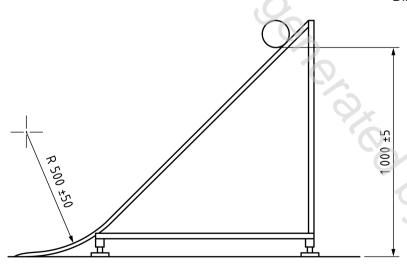


Figure 1 — Side view of ball roll ramp