Road and airfield surface characteristics - Test methods - Part 4: Method for measurement of slip/skid resistance of a surface: The pendulum test

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13036-4:2011 sisaldab Euroopa standardi EN 13036-4:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 13036-4:2011 consists of the English text of the European standard EN 13036-4:2011.
Standard on kinnitatud Eesti Standardikeskuse 31.10.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.10.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 05.10.2011.	Date of Availability of the European standard text 05.10.2011.
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Inglisekeelsed võtmesõnad: appointments, area, pavements, road superstructure, roads, shearing resistances, skid resisting properties, stationary, surface discontinuities, surface inspections, surface layers, surface properties, surface roughness, surfaces, testing, unevenness,

EUROPEAN STANDARD

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English Version

Road and airfield surface characteristics - Test methods - Part 4: Method for measurement of slip/skid resistance of a surface: The pendulum test

Caractéristiques de surface des routes et aérodromes - Méthode d'essai - Partie 4: Méthode d'essai pour mesurer l'adhérence d'une surface: L'essai au pendule

Oberflächeneigenschaften von Straßen und Flugplätzen - Prüfverfahren - Teil 4: Verfahren zur Messung der Griffigkeit von Oberflächen: Der Pendeltest

This European Standard was approved by CEN on 29 July 2011.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 13036-4:2011) has been prepared by Technical Committee CEN/TC 227 “Road materials”, 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 February 2012, and conflicting national standards shall be withdrawn at the latest by February 2012.

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 13036-4:2003.

This European Standard is one of a series of standards as listed below:

— EN 13036-1, *Road and airfield surface characteristics — Test methods — Part 1: Measurement of pavement surface macrotexture depth using a volumetric patch technique*

— CEN/TS 13036-2, *Road and airfield surface characteristics — Test methods — Part 2: Assessment of the skid resistance of a road pavement surface by the use of dynamic measuring systems*

— EN 13036-3, *Road and airfield surface characteristics — Test methods — Part 3: Measurement of pavement surface horizontal drainability*

— EN 13036-4, *Road and airfield surface characteristics — Test methods — Part 4: Method for measurement of slip/skid resistance of a surface — The pendulum test*

— prEN 13036-5, *Road longitudinal evenness — Definition (and calculation methods) of the longitudinal evenness indices*

— EN 13036-6, *Road and airfield surface characteristics — Test methods — Part 6: Measurement of transverse and longitudinal profiles in the evenness and megatexture wavelength ranges*

— EN 13036-7, *Road and airfield surface characteristics — Test methods — Part 7: Irregularity measurement of pavement courses: the straightedge test*

— EN 13036-8, *Road and airfield surface characteristics — Test methods — Part 8: Determination of transverse unevenness indices*

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, 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.

1 Scope

This European Standard describes a method for determining the slip/skid resistance of a surface using a device which remains stationary at the test location. The slip/skid resistance is measured by means of a slider mounted at the end of a pendulum arm.

The method provides a measure of the slip/skid resistance properties of a surface either in the field or in the laboratory.

This method measures the slip/skid resistance of a small area of a surface (approximately 0,01 m^2). This should be considered when deciding its applicability to a surface which may have non-homogeneous surface characteristics, e.g. containing ridges or grooves, or is rough textured (exceeding 1,2 mm mean texture depth).

NOTE As the results from this test are taken at one small location, the results cannot be compared with results from devices e.g. mobile devices, that measure the slip/skid resistance over a long length of a surface.

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 1097-8, *Tests for mechanical and physical properties of aggregates — Part 8: Determination of the polished stone value*

ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 4662, *Rubber, vulcanized or thermoplastic — Determination of rebound resilience*

ISO 7619-1, *Rubber, vulcanized or thermoplastic — Determination of indentation hardness — Part 1: Durometer method (Shore hardness)*

ISO 7619-2, *Rubber, vulcanized or thermoplastic — Determination of indentation hardness — Part 2: IRHD pocket meter method*

3 Terms and definitions

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

3.1
slip/skid resistance
property of the trafficked surface which limits the relative movement between the contact patch of pedestrian footwear or a vehicle tyre and the surface

NOTE 1 Loss of slip/skid resistance leads to loss of control by the pedestrian/driver with consequent increase in the risk of falling/ crashes.

NOTE 2 There are numerous factors which contribute to skid resistance, including the tyre pressure, contact area, tread pattern and rubber composition of the tyre or sole; the alignment, texture and frictional characteristics of the surface; the vehicle speed; the weather conditions, i.e. wet/dry and presence of surface contamination.

NOTE 3 Slip/ Skid resistance is not a constant but varies with climate and traffic and the effect of these on the characteristics of the surface material itself.