



National Standards Authority of Ireland
Údarás um Chaighdeáin Náisiúnta na hÉireann

IRISH STANDARD

I.S. EN 13036-8:2008

ICS 93.080.10
93.120

National Standards
Authority of Ireland
Northwood, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales

<http://www.standards.ie>

*This Irish Standard was
published under the authority
of the National Standards
Authority of Ireland and
comes into effect on:
18 June 2008*

**ROAD AND AIRFIELD SURFACE
CHARACTERISTICS - TEST METHODS - PART
8: DETERMINATION OF TRANSVERSE
UNEVENNESS INDICES**

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 2008

Price Code H

Údarás um Chaighdeáin Náisiúnta na hÉireann

This page is intentionally left BLANK.

ICS 93.080.10; 93.120

English Version

Road and airfield surface characteristics - Test methods - Part 8: Determination of transverse unevenness indices

Caractéristiques de surface des routes et aérodromes -
Méthodes d'essais - Partie 8 : Détermination des indices
d'uni transversal

Oberflächeneigenschaften von Straßen und Flugplätzen -
Prüfverfahren - Teil 8: Bestimmung der Parameter zur
Ermittlung der Breitenunebenheit

This European Standard was approved by CEN on 7 February 2008.

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.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 List of symbols.....	7
5 Parameters	8
5.1 General.....	8
5.2 Crossfall X	8
5.3 Irregularities	9
5.3.1 Step height I_S	9
5.3.2 Ridges/dips, respectively I_R , I_D	9
5.3.3 Edge Slump I_E	9
5.4 Rut depth R	10
5.5 Theoretical water depth W	10
6 Measurement devices and their application	11
6.1 Measurement devices	11
6.2 Measuring single profiles	12
6.2.1 Crossfall.....	12
6.2.2 Irregularities	12
6.2.3 Rut depth and theoretical water depth	12
6.3 Measuring sections of a unit of length (e.g. 100 m)	12
6.3.1 Irregularities	12
6.3.2 Crossfall, rut depth and theoretical water depth.....	12
7 Evaluation and analysis	12
8 Accuracy.....	13
8.1 General.....	13
8.2 Precision.....	13
8.3 Trueness	14
9 Safety	14
10 Report	14
Annex A (normative) Measurement of indices of transverse unevenness and irregularities with a straightedge	16
A.1 Measuring using the straightedge	16
A.1.1 General.....	16
A.1.2 Sampling frequency, covered measurement/analysis width	16
A.1.3 Method of measurement	16
A.2 Reporting of results.....	19
A.2.1 Test report	19
Bibliography	20

Foreword

This document (EN 13036-8:2008) 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 September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

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.

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.

Introduction

Road profile transverse unevenness affects safety and ride comfort. Transverse unevenness demands can differ from one road to another and are highly related to the speed limit, the kind of traffic, the climatic conditions, the accepted comfort limits, etc. Road profile transverse unevenness is consequently key information for acceptance of newly laid pavements and for road maintenance management systems.

Road profile transverse unevenness encompasses a variety of aspects, such as: the crossfall of the transverse profile, irregularities or different defects in the transverse profile (steps, ridges/dips and edge slumps) and the longitudinal ruts in the wheel paths caused by the traffic.

The measurement of road transverse unevenness has been a subject of much research for more than 70 years, resulting in many different measuring methods. Measurement devices can be split into:

- stationary equipment, such as e.g. the straightedge for irregularities and longitudinal ruts or rod and level for crossfall in single profiles,
- dynamic equipment, such as e.g. the profilometer, which is dependant on the characteristics of the device, suitable for measuring all mentioned aspects for single profiles as well as section (mean) values.

This European Standard has been written to be used in conjunction with the European Standards EN 13036-6 (Profilometer) and EN 13036-7 (Straightedge).

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-