

Characterization of pavement texture by use of surface profiles - Part 5: Determination of megatexture

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 13473-5:2010 sisaldab Euroopa standardi EN ISO 13473-5:2009 ingliskeelset teksti.

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English Version

Characterization of pavement texture by use of surface profiles -
Part 5: Determination of megatexture (ISO 13473-5:2009)

Caractérisation de la texture d'un revêtement de chaussée
à partir de relevés de profils de la surface - Partie 5:
Détermination de la mégatexture (ISO 13473-5:2009)

Charakterisierung der Textur von Fahrbelägen unter
Verwendung von Oberflächenprofilen - Teil 5: Bestimmung
der Megatextur (ISO 13473-5:2009)

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Foreword

The text of ISO 13473-5:2009 has been prepared by Technical Committee ISO/TC 43 "Acoustics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13473-5:2009 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of an identical text or by endorsement, at the latest by June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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Endorsement notice

The text of ISO 13473-5:2009 has been approved by CEN as a EN ISO 13473-5:2009 without any modification.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Significance and use of the megatexture indicators	6
5 Measurement and data processing principles	8
6 Test surface considerations	9
7 Measuring equipment	9
8 Measurement method	10
9 Data processing	12
10 Measurement uncertainty	15
11 Safety considerations during measurements	15
12 Test report	16
Annex A (informative) Example of test report and graphical presentations	18
Annex B (informative) Measurement uncertainty	24
Annex C (informative) Profile asymmetry issues	27
Bibliography	29

Introduction

Pavement surface texture largely influences factors such as noise emission caused by tyre/road interaction (Reference [7]), tyre/pavement friction (Reference [8]), and comfort, as well as rolling resistance and wear of tyres. Reliable methods of texture measurement are therefore essential.

Texture is subdivided into micro-, macro- and megatexture according to ISO 13473-2. A method for measurement and calculation of a macrotexture indicator based on a profile measurement is specified in ISO 13473-1. A procedure for measuring macrotexture by the volumetric patch method is described in ISO 10844:1994^[2], Annex A. Currently, no reliable and practical method of measuring pavement microtexture *in situ* is available. This part of ISO 13473 aims to provide means of measuring and calculating megatexture indicators useful for pavement surface characterization.

Megatexture is an important texture range lying between macrotexture and unevenness. This type of texture has wavelengths of the same order of magnitude as a tyre/road interface and is often a result of potholes or 'washboarding'. Some common types of singularities, such as a single depressed or protruding spot on the pavement, will also show up in a texture profile spectrum as megatexture. Although some pavements, such as paving stones, possess an intrinsic megatexture, it is usually an unwanted characteristic resulting from defects in the surface.

The scope of ISO 13473 (all parts) does not include profile analysis of road unevenness, which is dealt with in ISO 8608^[1].

Characterization of pavement texture by use of surface profiles —

Part 5: Determination of megatexture

1 Scope

This part of ISO 13473 specifies procedures for determining the average depth or level of pavement surface megatexture by measuring the profile curve of a surface and calculating megatexture descriptors from this profile. The technique is designed to give meaningful and accurate measurements and descriptions of pavement megatexture characteristics for various purposes.

Since there is an overlap between megatexture and the surrounding ranges, the megatexture descriptors unavoidably have a certain correlation with corresponding measures in those ranges. This part of ISO 13473 specifies measurements and procedures which are in relevant parts compatible with those in ISO 13473-1, ISO 8608^[1] and EN 13036-5^[6].

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.

ISO 13473-2:2002, *Characterization of pavement texture by use of surface profiles — Part 2: Terminology and basic requirements related to pavement texture profile analysis*

ISO 13473-3:2002, *Characterization of pavement texture by use of surface profiles — Part 3: Specification and classification of profilometers*

ISO/TS 13473-4:2008, *Characterization of pavement texture by use of surface profiles — Part 4: Spectral analysis of surface profiles*

ISO/IEC NP Guide 98-3:2008, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

IEC 61260, *Electroacoustics — Octave-band and fractional-octave-band filters*

3 Terms and definitions

For the purposes of this part of ISO 13473, the terms and definitions in ISO 13473-2, especially the following, apply.