



**International
Standard**

ISO 13473-5

**Characterization of pavement
texture by use of surface profiles —**

**Part 5:
Determination of megatexture**

*Caractérisation de la texture d'un revêtement de chaussée à
partir de relevés de profils de la surface —*

Partie 5: Détermination de la mégatexture

**Second edition
2025-03**

**Corrected version
2025-06**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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This document was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This second edition cancels and replaces the first edition (ISO 13473-5:2009), which has been technically revised.

The main changes are as follows:

- default measure RMS_{Me} in mm instead of L_{Me} in dB;
- use the same pre-processing procedures as in ISO 13473-1 (drop-out and spikes);
- use digital filters to calculate megatexture, earlier done by spectral analysis;
- improvements of the uncertainty description of megatexture calculations;
- informative annex with reference program and reference calculations, available at the www.erpug.org homepage.

A list of all parts in the ISO 13473 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

This corrected version of ISO 13473-5:2025 incorporates the following correction:

- correction of the first formula in Note 3 to entry of term 3.3.5.

Introduction

Pavement surface texture largely influences factors such as noise emission caused by tyre/road interaction (see Reference [1]), tyre/pavement friction (see Reference [2]), and comfort, as well as rolling resistance (see Reference [3]) and wear of tyres. Reliable methods of measuring and characterizing texture 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[4]. A procedure for measuring macrotexture by the volumetric patch method is described in EN 13036-1[5]. Currently, no reliable and practical method of measuring pavement microtexture in situ is available. This document aims to provide means of measuring and calculating a megatexture indicator 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 (e.g. a pothole) or protruding (e.g. caused by tree roots) 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. Megatexture is an undesirable feature, the higher the value, the worse the road is perceived: megatexture is known to increase tyre/road noise by inducing tyre vibrations. At the same time, these tyre vibrations cause energy dissipation in the tyre. The rolling resistance increases and this leads to highly unwanted fuel consumption and CO₂ emission (see also 3.2).

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