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Acoustics — Specification of test tracks for measuring noise emitted by road vehicles and their tyres

Acoustique — Spécification des surfaces d'essai pour le mesurage du bruit émis par les véhicules routiers et leurs pneumatiques



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*, in collaboration with ISO/TC 22, *Road vehicles*.

This third edition cancels and replaces the second edition (ISO 10844:2011), of which it constitutes a minor revision.

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Introduction

In general, the road surface parameters affecting the noise emission of vehicles are the texture and sound absorption characteristics. In addition, the mechanical impedance and the skid resistance properties of the surface layer can also influence measured noise levels.

In order to minimize the variation in rolling sound emission and vehicle sound emission measurements made at different testing locations, it is therefore necessary to specify the relevant surface properties and recommend carefully the properties of the materials, design, and construction of the test surface.

The principal objective of this International Standard is to provide a revised specification of the surface which improves the reproducibility of measurement.

This International Standard is designed in a way that test tracks conforming to this International Standard are compatible with the first edition, but in addition the variability of properties is reduced.

It is important that the test provides a high degree of reproducibility between different test sites and that the surface design should not only minimize the inter-site variation of tyre or road noise, but should also ensure that the propagation of noise is unaffected by the surface used. This latter consideration precludes the use of road surfaces which have open textures and which have the property of absorbing noise from the power unit and other related sources.

In relation to the first edition, this International Standard includes, including more restrictive specifications of the surface and recommendations for the test track construction process and maintenance. The basic properties of the surface remain unchanged.

The users of this International Standard are encouraged to measure END_T and to communicate the data to the ISO/TC 43/SC 1 for analysis before the next periodical review.

Furthermore, this International Standard recommends a non-destructive test method for periodical checking of the surface characteristics.

This International Standard is quoted in several International Standards (e.g. the ISO 362 series, ISO 13325).