Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 3: Normalized traffic noise spectrum

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

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NATIONAL FOREWORD

See Eesti standard EVS-EN 1793-3:2025 sisaldab Euroopa standardi EN 1793-3:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 1793-3:2025 consists of the English text of the European standard EN 1793-3:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.12.2025.	Date of Availability of the European standard is 24.12.2025.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 3: Normalized traffic noise spectrum

Dispositifs de réduction du bruit du trafic routier - Méthode d'essai pour la détermination de la performance acoustique - Partie 3: Spectre sonore normalisé de la circulation

Lärmschutzeinrichtungen an Straßen - Prüfverfahren zur Bestimmung der akustischen Eigenschaften - Teil 3: Standardisiertes Verkehrslärmspektrum

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 1793-3:2025) has been prepared by Technical Committee CEN/TC 226 “Road equipment”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by June 2026, and conflicting national standards shall be withdrawn at the latest by June 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1793-3:1997.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

EN 1793-3:2025 includes the following significant technical changes with respect to EN 1793-3:1997:

— The terminology in the ‘Introduction’ clause has been updated.

— The ‘Terms, definitions’ and the ‘Symbols and abbreviations’ clauses have been updated.

— The ‘References’ clause has been updated.

The EN 1793 series, under the general title *Road traffic noise reducing devices — Test method for determining the acoustic performance*, consists of the following parts:

— *Part 1: Intrinsic characteristics — Sound absorption under diffuse sound field conditions;*

— *Part 2: Intrinsic characteristics — Airborne sound insulation under diffuse sound field conditions;*

— *Part 3: Normalized traffic noise spectrum;*

— *Part 4: Intrinsic characteristics — Intrinsic sound diffraction;*

— *Part 5: Intrinsic characteristics — Sound absorption under direct sound field conditions;*

— *Part 6: Intrinsic characteristics — Airborne sound insulation under direct sound field conditions.*

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

As the main acoustic properties of road traffic noise reducing devices, sound absorption and airborne sound insulation, are frequency-dependent, there is a need to define a traffic noise spectrum for test purposes. This document defines the basic properties of traffic noise measured at the roadside in terms of a characteristic normalized traffic noise spectrum, which is needed to evaluate single-number ratings of noise reducing devices, except those used in reverberant conditions, e.g. tunnels.

1 Scope

This document specifies a normalized traffic noise spectrum for the evaluation and assessment of the acoustic performance of devices designed to reduce traffic noise near roads.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

3.1
road traffic noise reducing device
RTNRD
device designed to reduce the propagation of traffic noise away from the road environment

Note 1 to entry: An RTNRD can comprise acoustic elements (3.2) only or both structural (3.3) and acoustic elements.

Note 2 to entry: Applications of RTNRDs include noise barriers (3.5), claddings (3.6), covers (3.7) and added devices (3.8).

3.2
acoustic element
element whose primary function is to provide the acoustic performance of the device

3.3
structural element
element whose primary function is to support or hold in place the parts of the RTNRD

3.4
self-supporting acoustic element
acoustic element including its own structural element to support itself

3.5
noise barrier
road traffic noise reducing device which obstructs the direct transmission of airborne sound emanating from road traffic

3.6
cladding
road traffic noise reducing device which is attached to a wall or other structure and reduces the amount of sound reflected

3.7
cover
road traffic noise reducing device which either spans or overhangs the road