

Road traffic noise reducing devices - Procedures for assessing long term performance - Part 2: Non-acoustical characteristics

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acoustical characteristics

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14389-2:2004 sisaldab Euroopa standardi EN 14389-2:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14389-2:2004 consists of the English text of the European standard EN 14389-2:2004.</p> <p>This document is endorsed on 23.11.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard specifies assumed working life requirements and is also intended to assist suppliers in its prediction. It is to be used only for devices manufactured from materials covered by standards which allow prediction of working life. Materials excepted are those which do not affect the non acoustic performance of the device required by EN 1794 parts 1 and 2</p>	<p>Scope:</p> <p>This standard specifies assumed working life requirements and is also intended to assist suppliers in its prediction. It is to be used only for devices manufactured from materials covered by standards which allow prediction of working life. Materials excepted are those which do not affect the non acoustic performance of the device required by EN 1794 parts 1 and 2</p>
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ICS 93.080.30

Võtmesõnad: acoustic absorption, durability, life, measuring t, methods for measuring, noise control, noise control devices, noise protection devices, noise protection walls, noise reduction, properties, roads, specification (approval), specifications, testing, traffic noise

ICS 93.080.30

English version

Road traffic noise reducing devices - Procedures for assessing
long term performance - Part 2: Non-acoustical characteristics

Dispositifs de réduction du bruit du trafic routier - Méthodes
d'évaluation des performances à long terme - Partie 2 :
Caractéristiques non acoustiques

Lärmschutzeinrichtungen an Straßen - Verfahren zur
Bewertung der Langzeitwirksamkeit - Teil 2:
Nichtakustische Eigenschaften

This European Standard was approved by CEN on 24 June 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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

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Foreword

This document (EN 14389-2:2004) 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 February 2005, and conflicting national standards shall be withdrawn at the latest by February 2005.

This part is concerned with long-term durability. It should be read in conjunction with:

EN 1793, *Road traffic noise reducing devices – Test method for determining the acoustical performance*

Part 1: Intrinsic characteristics of sound absorption

Part 2: Intrinsic characteristics of airborne sound insulation

EN 1794, *Road traffic noise reducing devices - Non-acoustic performance*

Part 1: Mechanical performance and stability requirements

Part 2: General safety and environmental requirements

prEN 14389, *Road traffic noise reducing devices - Procedures for assessing long-term performance*

Part 1: Acoustical characteristics

EN 60721-3-4, *Classification of environmental conditions*

Part 3: Classification of groups of environmental parameters and their severities – Section 4: Stationary use at non-weatherprotected locations (IEC 60721-3-4:1995)

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

Noise reducing devices alongside roads should not only fulfil their acoustic function and structural design requirements in accordance with appropriate documents, but also maintain their performance during the required working life. The structural elements need to retain acceptable minimum safety factors at the end of their design life and the acoustic elements not only have to remain effective structurally but provide the specified acoustic performance.

All elements in the construction of noise reducing devices should be resistant to corrosion and embrittlement, be dimensionally stable and have generally a high ageing resistance in many differing conditions.

1 Scope

This document specifies assumed working life requirements and is also intended to assist suppliers in its prediction.

It is to be used only for devices manufactured from materials covered by documents which allow prediction of working life (see Annex B). Materials excepted are those which do not affect the non acoustic performance of the device required by EN 1794 parts 1 and 2.

Standards of construction and any material tests conducted should provide evidence of resistance to specified conditions selected from the following:

I. Chemical Agents	Location dependent
II. De-icing salt	Location/climate Dependent
III. Dirty water/dust	Location/ Climate dependent
IV. Dew	Climate dependent
V. Freeze/thaw	Climate dependent
VI. Cold	Climate dependent
VII. Heat	Climate dependent
VIII. UV Radiation	Climate dependent
IX. Traffic Vibration	Location dependent
X. Biological Process	Climate dependent
XI. Ozone	Location dependent
XII. Water	Climate dependent
XIII. Water spray Wet/dry	Location dependent

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.

EN 1794-1, *Road traffic noise reducing devices – Non-acoustic performance – Part 1: Mechanical performance and stability requirements*

EN 1794-2, *Road traffic noise reducing devices – Non-acoustic performance – Part 2: General safety and environmental requirements*.

EN 60721-3-4, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 4: Stationary use at non-weatherprotected locations (IEC 60721-3-4:1995)*.

3 Terms and definitions

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

3.1 structural elements

elements whose primary function is to support or hold in place acoustic elements

3.2 acoustic elements

elements whose primary function is to provide the acoustic performance of the device

3.3 working life

period of time during which the performance of the device will be maintained which enables it to fulfil the performance characteristics as identified in EN 1794 parts 1 and 2

3.4 roadside exposure

use of the product as a noise reducing device installed alongside a road

4 Requirements

4.1 General

The structural design shall comply with the requirements of the appropriate European code.

When assessed against the environmental conditions listed in Annex A of this document, the product shall satisfy the normative parts of road traffic noise reducing devices - non acoustic performance EN 1794 parts 1 and 2.

4.2 Structural elements

All structural elements shall normally be designed to give a working life of 30 years under specific conditions, however, a longer or shorter life may be specified.