

Road traffic noise reducing devices - Non-acoustic performance - Part 3: Reaction to fire - Burning behaviour of noise reducing devices and classification

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 1794-3:2016 sisaldab Euroopa standardi EN 1794-3:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 1794-3:2016 consists of the English text of the European standard EN 1794-3:2016.
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English Version

Road traffic noise reducing devices - Non-acoustic  
performance - Part 3: Reaction to fire - Burning behaviour  
of noise reducing devices and classification

Dispositifs de réduction du bruit du trafic routier -  
Performance non acoustique - Partie 3: Réaction au feu  
- Comportement au feu des dispositifs de réduction du  
bruit et classification

Lärmschutzvorrichtungen an Straßen - Nichtakustische  
Eigenschaften - Teil 3: Brandverhalten -  
Brennverhalten von Lärmschutzvorrichtungen und  
Klassifizierung

This European Standard was approved by CEN on 15 April 2016.

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<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Symbols and abbreviations</b> .....	<b>6</b>
<b>5 Test methods and classification</b> .....	<b>6</b>
<b>5.1 Resistance to brushwood fire</b> .....	<b>6</b>
<b>5.1.1 General</b> .....	<b>6</b>
<b>5.1.2 Classification</b> .....	<b>7</b>
<b>5.1.3 Fire test</b> .....	<b>7</b>
<b>5.2 Reaction to fire, smoke density and toxic fumes</b> .....	<b>8</b>
<b>5.2.1 Principles of the tests for reaction to fire</b> .....	<b>8</b>
<b>5.2.2 Suitability of a noise reducing device for testing and preparation</b> .....	<b>8</b>
<b>5.2.3 Smoke density and toxic fumes</b> .....	<b>9</b>
<b>6 Report</b> .....	<b>11</b>
<b>6.1 General</b> .....	<b>11</b>
<b>6.2 Resistance to brushwood fire</b> .....	<b>11</b>
<b>6.3 Reaction to fire, smoke density and toxic fumes</b> .....	<b>11</b>
<b>Annex A (informative) Classification of reaction to fire for noise reducing devices</b> .....	<b>12</b>
<b>Bibliography</b> .....	<b>13</b>

## European foreword

This document (EN 1794-3:2016) 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 January 2017, and conflicting national standards shall be withdrawn at the latest by January 2017.

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

This European Standard, *Road traffic noise reducing devices — Non-acoustic performance*, is part of a series composed of the following:

- *Part 1: Mechanical performance and stability requirements;*
- *Part 2: General safety and environmental requirements;*
- *Part 3: Reaction to fire — Burning behaviour of noise reducing devices and classification.*

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

## Introduction

It is necessary to understand how different materials react to fire and what happens if it burns because this situation could have adverse effects on environment and human life and cause in special situations great consequences in economic or social aspects.

In general, the brushfire test gives enough information for most applications for noise reducing devices. In case where more stringent requirements are necessary, further testing for reaction to fire will be done according to EN 13501-1.

This European Standard also contains indications for smoke hazard; density and toxic fumes, because this could create dangerous situations for the traffic and nearby living people. Test for smoke density and toxic fumes are necessary in all cases.

The European Standard for classification, the EN 13501 series, is clear in its classification. This European Standard defines specific tests to classify products and for Noise Reducing Devices. This European Standard give more information about how to prepare specimen and supporting constructions if they are needed in a way that this product can be tested according to the specific standards mentioned in the EN 13501 series.

## 1 Scope

This European Standard is to give authorities, designers and specifiers information with respect to reaction to fire, smoke density and toxic fumes of materials used in noise reducing devices.

The combination of brushwood fire test, smoke density test and test for toxic fumes give in general enough safety information. This European Standard gives also information if more stringent requirements are requested for situations with a higher level of safety.

For noise reducing devices, this European Standard gives a method how to handle substantial components of non-homogeneous products (as defined in EN 13501-1 and ISO/DIS 5659-2:2016) and how to handle non-homogeneous products and in which cases the influence of non-substantial components on the total result of the classification may be neglected.

The following effects will be taken into account: ignitability, burning droplets, smoke growth rate, smoke density, toxic fumes.

The European Commission Decision 96/603/EC establish the list of products belonging to Classes A 'No contribution to fire'. The materials, and products made from them, that are listed in the Annex to this Decision, will, on account of their low level of combustibility and subject to the conditions also set out in the Annex, be classified in Classes A1 and Class A1<sub>FL</sub> as provided for in Tables 1 and 2 of the Annex to Decision 2000/147/EC. For the purpose of this classification, no reaction-to-fire testing of those materials and products made from them is required. The products considered having no contribution to fire are excluded from this standard.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1363-1:2012: *Fire resistance tests — Part 1: General Requirements*

EN 13501-1:2007+A1:2009, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2)*

ISO/DIS 5659-2:2016, *Plastics — Smoke generation — Part 2: Determination of optical density by a single-chamber test*

## 3 Terms and definitions

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

### 3.1

#### **noise reducing device**

#### **NRD**

device that is designed to reduce the propagation of traffic noise away from the road environment

Note 1 to entry: This may be a noise barrier, cladding, a road cover or an added device. These devices may include both acoustic and structural elements.