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Hearing protectors - Recommendations for selection, use, care and maintenance - Guidance document

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 458:2025 sisaldab Euroopa standardi EN 458:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.12.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 458:2025 consists of the English text of the European standard EN 458:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 24.12.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 13.340.20

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EUROPEAN STANDARD

EN 458

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 13.340.20

Supersedes EN 458:2016

English Version

## Hearing protectors - Recommendations for selection, use, care and maintenance - Guidance document

Protecteurs individuels contre le bruit -  
Recommandations relatives à la sélection, à  
l'utilisation, aux précautions d'emploi et à l'entretien -  
Document guide

Gehörschützer - Empfehlungen für Auswahl, Einsatz,  
Pflege und Instandhaltung - Leitfaden

This European Standard was approved by CEN on 1 December 2025.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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## European foreword

This document (EN 458:2025) has been prepared by Technical Committee CEN/TC 159 “Hearing protectors” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by June 2026, and conflicting national standards shall be withdrawn at the latest by June 2026.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 458:2016.

The main changes compared to the previous edition are listed in Annex I, Table I.1.

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

This document is intended to guide employers, supervisors and safety advisors. Additionally, this document gives information to all who need to use hearing protectors.

Hearing protectors are intended to protect against the risk of harmful noise and are elevated into the highest risk Category III under the Personal Protective Equipment Regulation (EU) 2016/425, which can cause irreversible health effects or can be potentially life threatening. They are intended to reduce the harmful effects that sound and noise can have on the hearing of an individual. Requirements for hearing protection products are given in the EN 352 series.

Guidance is provided on how to best select, use and maintain hearing protectors and check for compatibility for other equipment (e.g. Personal Protective Equipment (PPE), communication devices and hearing aids). Calculation procedures to estimate the residual noise exposure level, when a certain hearing protector is used, are also provided.

National bodies can develop their own local application documents based on this document.

Hearing protectors are generally available in two main forms: earmuffs and earplugs. Both forms are available with additional features and functions. All have their advantages and disadvantages in terms of attenuation, comfort, ease of use, communication facilities and cost.

In hearing conservation programmes noise hazard areas are identified and the personal noise exposure is assessed. Before a suitable hearing protector is considered, priority should be given to reducing noise at source and/or reducing the exposure time.

If the use of a hearing protector is found necessary or advisable, choosing optimum devices is a complex task. The most important aspects for hearing protector performance include sufficient attenuation and usage during the entire exposure period.

It is often desirable to retain the ability to hear speech and warning signals. If the hearing protector is a passive device only, the hearing protector should not provide excessive attenuation (over-protection), which can create a feeling of isolation and difficulties with perception of important sounds. In particular, this needs attention at moderate noise levels.

Hearing protectors are supplied with attenuation data in various formats. The attenuation is expressed in decibels and has been derived from laboratory tests. It is important to note that these data have been achieved under controlled laboratory conditions using trained test subjects. Under real working conditions, the attenuation achieved by the user can be lower than that generated by the laboratory testing.

The performance of hearing protectors is subject to natural variability in the anatomy amongst users. Correct fitting, training, regular inspection and user motivation are important to obtain the desired protection. Due to the natural variability, it is not possible to calculate the exact attenuation that a certain hearing protector will give for an individual. If a more accurate prediction is required, an individual fit test is strongly recommended. At high noise level exposures it is advisable to seek expert advice. In some cases dual protection, i.e. the use of an earmuff and an earplug combination, can be required.

For hearing protectors to be effective they should be used at all times when the user is in a potentially hazardous noise environment. When selecting hearing protectors, attention should be given to factors influencing comfort and user preference.

This document also provides advice on how to consider sustainability.

## 1 Scope

This document gives recommendations for the selection, use, care and maintenance of hearing protectors.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 352-6, *Hearing protectors — Safety requirements — Part 6: Earmuffs with safety-related audio input*

EN 352-8, *Hearing protectors — Safety requirements — Part 8: Entertainment audio earmuffs*

EN 352-9, *Hearing protectors — Safety requirements — Part 9: Earplugs with safety-related audio input*

EN 352-10, *Hearing protectors — Safety requirements — Part 10: Entertainment audio earplugs*

## 3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### daily noise exposure level

$L_{EX,8h}$

A-weighted noise exposure level normalized to a nominal 8 h working day according to EN ISO 9612

### 3.2

#### peak sound pressure level

$L_{p,Cpeak}$

C-weighted instantaneous peak sound pressure level according to EN ISO 9612

### 3.3

#### national regulation level

$L'_{NR}$

daily noise exposure level ( $L_{EX,8h}$ ) effective to the ear according to national regulations

Note 1 to entry: National laws or regulations determine the levels of exposure at which hearing protectors are provided or used.

### 3.4

#### national peak regulation level

$L'_{NR,peak}$

peak pressure level  $L_{p,Cpeak}$  effective to the ear according to national regulations

Note 1 to entry: National laws or regulations determine the levels of exposure at which hearing protectors are provided or used.