

<b>STN</b>	<b>Chrániče sluchu Skúšanie Časť 2: Akustické skúšobné metódy</b>	<b>STN EN 13819-2</b>  83 2136
------------	---	--

Hearing protectors - Testing - Part 2: Acoustic test methods

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/21

Obsahuje: EN 13819-2:2020

Oznámením tejto normy sa ruší  
STN EN 13819-2 (83 2136) z mája 2004

**132351**



EUROPEAN STANDARD

**EN 13819-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2020

ICS 13.340.20

Supersedes EN 13819-2:2002

English Version

## Hearing protectors - Testing - Part 2: Acoustic test methods

Protecteurs individuels contre le bruit - Essais - Partie  
2 : Méthodes d'essai acoustiqueGehörschützer - Prüfung - Teil 2: Akustische  
Prüfverfahren

This European Standard was approved by CEN on 24 February 2020.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN 13819-2:2020 (E)**

<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 Test methods</b> .....	<b>6</b>
<b>4.1 Insertion loss (earmuffs only)</b> .....	<b>6</b>
<b>4.1.1 Principle</b> .....	<b>6</b>
<b>4.1.2 Apparatus</b> .....	<b>6</b>
<b>4.1.3 Procedure</b> .....	<b>6</b>
<b>4.1.4 Report</b> .....	<b>6</b>
<b>4.2 Sound attenuation</b> .....	<b>7</b>
<b>4.2.1 Principle</b> .....	<b>7</b>
<b>4.2.2 Apparatus</b> .....	<b>7</b>
<b>4.2.3 Procedure</b> .....	<b>7</b>
<b>4.2.4 Report</b> .....	<b>9</b>
<b>Annex A (informative) Uncertainty of measurement and interpretation of test results</b> .....	<b>11</b>
<b>Bibliography</b> .....	<b>13</b>

## European foreword

This document (EN 13819-2:2020) 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 May 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.

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 will supersede EN 13819-2:2002.

In comparison with the previous edition, the following technical modifications have been made:

- 4.2.3 some details on the test procedure for the sound attenuation of earplugs and custom moulded earplugs added;
- 4.3 of EN 13819-2:2002 (Sound level effective to the ear ( earmuffs only)) deleted;
- Annex ZA of EN 13819-2:2002 deleted.

The technical changes referred to include the significant technical changes from the European Standard revised but is not an exhaustive list of all modifications from the previous edition.

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, Turkey and the United Kingdom.

**EN 13819-2:2020 (E)****Introduction**

This document specifies procedures for the testing of personal hearing protection devices in relation to Regulation (EU) 2016/425 - Personal Protective Equipment.

A series of standards EN 352 describes product requirements of hearing protectors:

- EN 352-1, *Hearing protectors — General requirements — Part 1: Earmuffs*
- EN 352-2, *Hearing protectors — General requirements — Part 2: Earplugs*
- EN 352-3, *Hearing protectors — General requirements — Part 3: Earmuffs attached to head protection and/or face protection devices*
- EN 352-4, *Hearing protectors — Safety requirements — Part 4: Level-dependent earmuffs*
- EN 352-5, *Hearing protectors — Safety requirements — Part 5: Active noise reduction earmuffs*
- EN 352-6, *Hearing protectors — Safety requirements — Part 6: Earmuffs with safety-related audio input*
- EN 352-7, *Hearing protectors — Safety requirements — Part 7: Level-dependent earplugs*
- 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*

Test methods for these requirements are described in the series of standards EN 13819:

- EN 13819-1, *Hearing protectors — Testing — Part 1: Physical test methods*
- EN 13819-2, *Hearing protectors — Testing — Part 2: Acoustic test methods*
- EN 13819-3, *Hearing protectors — Testing — Part 3: Supplementary acoustic test methods*

An associated standard EN 458 covers selection, use, care and maintenance of hearing protectors.

EN 13819-2 is intended as a supplement to the specific product standards for hearing protectors.

4.1 specifies a method of measuring the insertion loss of earmuffs using an acoustic test fixture.

4.2 specifies a method of measuring the sound attenuation of hearing protectors using human test subjects.

The performance requirements are given in the hearing protector product standard.

## **1 Scope**

This document specifies acoustic test methods for hearing protectors. The purpose of these tests is to enable assessment of the performance of the hearing protector as specified in the appropriate product standard.

## **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 ISO 4869-1:2018, *Acoustics — Hearing protectors — Part 1: Subjective method for the measurement of sound attenuation (ISO 4869-1:2018)*

EN ISO 4869-2:2018, *Acoustics — Hearing protectors — Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn (ISO 4869-2:2018)*

EN ISO 4869-3:2007, *Acoustics — Hearing protectors — Part 3: Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture (ISO 4869-3:2007)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**