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IRISH STANDARD

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**HEARING PROTECTORS - SAFETY  
REQUIREMENTS AND TESTING - PART 6:  
EAR-MUFFS WITH ELECTRICAL AUDIO  
INPUT**

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English version

## Hearing protectors - Safety requirements and testing - Part 6: Ear-muffs with electrical audio input

Protecteurs individuels contre le bruit - Exigences de  
sécurité et essais - Partie 6: Serre-tête avec entrée audio-  
électrique

Gehörschützer - Sicherheitstechnische Anforderungen und  
Prüfungen - Teil 6: Kapselgehörschützer mit  
Kommunikationseinrichtungen

This European Standard was approved by CEN on 16 October 2002.

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## **Foreword**

This document (EN 352-6:2002) has been prepared by Technical Committee CEN/TC 159, "Hearing protectors", the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by June 2003, and conflicting national standards shall be withdrawn at the latest by June 2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directives, see informative Annex ZA, which is an integral part of this standard.

In this standard the annexes A and B are informative.

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

## EN 352-6:2002 (E)

### Introduction

This standard for "Hearing Protectors – safety requirements and testing – Part 6: Ear-muffs with electrical audio input", specifies procedures for the testing of personal hearing protection devices in relation to Directive 89/686/EEC - Personal Protective Equipment.

EN 352-1 deals with requirements for ear-muffs, EN 352-2 with ear-plugs, EN 352-3 with ear-muffs attached to industrial safety helmets. EN 13819-1 and EN 13819-2 deal with testing plans common to all types of hearing protectors covered by this series of ENs.

Additional safety requirements and the associated test procedures for level-dependent ear-muffs are contained in EN 352-4, for ear-muffs with active noise reduction in EN 352-5 and for level-dependent ear-plugs in EN 352-7. An associated standard EN 458, covers selection, use, care and maintenance of hearing protection.

The particular requirement for hearing protectors in relation to their ability to reduce noise to below daily limit levels set by Directive 86/188/EEC - "on the protection of workers from the risks related to exposure to noise at work" is addressed in the standard by means of a requirement to report the output sound levels of the electrical audio circuit.

An additional acoustic performance test method to that described in EN 24869-1 and applied in EN 352-1, EN 352-2 and EN 352-3 is required for ear-muffs with electrical audio input. Until such time as this work is completed, the test method described in Annex B of this standard is recommended for ear-muffs with electrical audio input, in addition to the EN 24869-1 test required within EN 352-1.

Ear-muffs with electrical audio input are designed to provide speech information and warning signals, while providing attenuation of sounds in excess of limit levels. They may be selected for use in a number of different working environments, in air traffic communication, in the police forces, in the broadcasting and entertainment industries, in intermittent or impulsive noise environments when speech information needs to be received and where other warning signals are required to be heard.

This part of the standard is a specification intended for type approval purposes, for which four sets of specimen ear-muffs are tested, (further samples may be required for testing under EN 351, or EN 352-3, as appropriate).

The requirements and tests of the standard are concerned primarily with the electrical audio input performance of the ear-muffs. The standard may be applied to ear-muffs for fitting to industrial safety helmets.

### 1 Scope

This European Standard is concerned with ear-muffs whose passive acoustic performance may be supplemented by an electrical audio input facility or circuit for essential safety-related purposes. It specifies additional constructional, design and performance requirements, methods of test, marking requirements and user information relating to the incorporation of the electrical audio input facility.

The requirements of this standard are intended to take account of the ergonomic interaction between the wearer, the device and, where possible, the working environment in which the device is likely to be used (see Annex ZA of this standard and EN 458)

### 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 352-1:2002, *Hearing protectors - General requirements - Part 1: Ear-muffs*

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