

SINGAPORE STANDARD

**Code of practice for selection, use, care
and maintenance of hearing protectors**

(Formerly CP 76)



Published by

Enterprise
Singapore

SS 549 : 2009
(ICS 13.340.20)

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maintenance of hearing protectors**

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ISBN 978-981-4278-18-8

This Singapore Standard having been approved by the General Engineering and Safety Standards Committee was endorsed by the Standards Council on 6 August 2009.

First published, 1999

First revision and re-numbered as SS 549, 2009.

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Foreword

This Singapore Standard was prepared by a Working Group appointed by the Technical Committee for Personal Safety and Health under the purview of the General Engineering and Safety Standards Committee. It is a revision of the code of practice, CP 76 which was first prepared in 1999. CP 76 has been re-numbered as SS 549.

Hearing protectors are items of personal protective equipment which, as a result of their attenuating properties, reduce the harmful effects of noise and help prevent hearing damage. In order to have effective hearing protection, hearing protectors should be used properly all the time. Therefore, attention should be paid to the important factors which may influence comfort and acceptance.

This revision brings the Code up-to-date and comprehensive by incorporating recommendations made in the latest relevant international standards. The language used has been simplified to enable easy understanding. The main revisions are:

1. Hearing protectors have been classified in the passive and active hearing types and according to their function modes. Illustrations have been updated.
2. Symbols and nomenclature for equations have been standardised and the pascal unit has been removed to simplify calculation for noise exposure.
3. Practical guidance to compensate for the laboratory-derived attenuation values and actual protection of passive hearing protectors (derating) has been included.
4. Hearing conservation programme has been updated.
5. Worked examples and illustrations on the calculation of noise levels have been included in the noise evaluation for hearing conservation.

In preparing this standard, reference was made to BS EN 458 : 2004 – Hearing protectors – Recommendations for selection, use, care and maintenance – Guidance document and the following publications:

1. BS EN 352-1 : 2002 Hearing protectors – General requirements – Part 1: Ear-muffs
2. BS EN 352-2 : 2002 Hearing protectors – General requirements – Part 2: Ear-plugs
3. ISO 4869-1 : 1990 Acoustics – Hearing protectors – Part 1: Subjective method for the measurement of sound attenuation
4. ISO 4869-2 : 1994 Acoustics – Hearing protectors – Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn
5. ISO 7731 : 2005 Ergonomics – Danger signals for public and work areas – Auditory danger signals
6. Factories (Noise) Regulations 1996, Ministry of Manpower, Singapore
7. Guidelines on Hearing Conservation Programme (Ministry of Manpower, Singapore)
8. NIOSH Publication No. 98-126 on Criteria for a recommended standard (Occupational noise exposure)

9. Factories (Medical Examinations) Regulations 1985, Ministry of Manpower, Singapore

Acknowledgement is made for the use of information from the above publications.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
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Code of practice for selection, use, care and maintenance of hearing protectors

1 Scope

1.1 This Singapore Standard gives recommendations for the selection, use, care and maintenance of hearing protectors.

1.2 Special types of hearing protectors are outside the scope of this standard, although they are classified in Clause 7 with guidance on their use.

1.3 In hearing conservation programme, priority should be given to engineering and administrative noise control measures. Personal hearing protection should be used as a last resort.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ANSI S12.6, *Methods for measuring the real-ear attenuation of hearing protectors*

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

BS EN 352-2, *Hearing protectors – General requirements – Part 2: Ear-plugs*

IEC 61672-1, *Electro-acoustics – Specifications*

ISO 4869-1, *Acoustics – Hearing Protectors – Part 1: Subjective method for the measurement of sound attenuation*

ISO 4869-2, *Acoustics – Hearing protectors – Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn*

ISO 7731, *Ergonomics – Danger signals for public and work areas – Auditory danger signals*

Guidelines on Hearing Conservation Programme (Ministry of Manpower, Singapore)

Factories (Noise) Regulations, Ministry of Manpower, Singapore

Factories (Medical Examinations) Regulations, Ministry of Manpower, Singapore