

THE NEW CSA Z94-2 STANDARD HEARING PROTECTION DEVICES – PERFORMANCE, SELECTION, CARE AND USE

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This Standard was published in January 2002. It was prepared by the CSA Technical Committee on Hearing Protection Devices after two years of hard work. It is supposed to be a document balanced between the needs of manufacturers and of users alike. It is expected that health and safety personnel will find a lot of useful information that will help them in their everyday dealings.

The first five sections of the Standard are dedicated to issues common in all similar CSA Standards. Their titles are: Scope, Definitions, Reference Publications, Materials and Requirements.

Section 6, Test Procedures, specifies that tests should be performed as per ANSI Standard S12.6, although test results as per ANSI Standard S3.19 are also accepted. The test procedure to be used is the Method B, that is a Real-car attenuation at threshold (REAT) procedure, where protectors are fit by the subjects that are persons not familiar with the use of protectors (naïve subjects). Results from the test are reported as octave band data. Those data are used to compute the Single Number Rating (Subject Fit 84th Percentile), abbreviated SNR(SF₈₄) that provides a nominal 84% protection confidence interval (i.e., 84% of the users in a well-run hearing conservation program are expected to receive at least that much protection). The procedure for the calculation of SNR(SF₈₄) is in Appendix A of the Standard. Using the SNR(SF₈₄) data, a Grade will be assigned to the protector, as per Table 2. If, however, data from measurements using the procedure in ANSI Standard S3.19 are used, then an attenuation class will be assigned as per Table 3 in the Standard.

The Force Measurement of the headband is compulsory for muffs. However, the Physical Performance Tests described in the Standard are optional.

Section 7, Packaging Information is of especial interest to manufacturers.

The following three sections: Section 8, Selection, Care and Use; Overview and General Requirements, Section 9, Selection of Hearing

Protection Devices and Section 10, Fit, Care and Use of Hearing Protection Devices are most important for users and health and safety professionals, since they deal with issues fundamental for an efficient use of protectors in the workplace.

This information is complemented with Section 11, Implementation, that is a guide on how to introduce protectors in the workplace in such a way that they are used efficiently.

Sections 8 through 11 include information such as sound attenuation, attenuation at frequency extremes, double protection, overprotection, etc. Their content will be helpful to anyone writing a Hearing Protection Program in the workplace.

The last Section 12, Specialized Hearing Protection Devices, is a guide into the non-conventional types of hearing protectors, their characteristics and applications. It includes active protection devices (ANR headsets), protectors with linear attenuation, sound restoration, frequency sensitive, etc.

The Standard, 49 pages long, is available from the Canadian Standard Association whose web site is www.csa.ca