



REGULATIONS

The exposure levels which define whether hearing protection should be worn are determined under the "Control of Noise At Work regulations 2005" as follows:

Lower Exposure Action Value - if an employee is exposed to average sound levels during the working day at or above 80dB(A) and below 85dB(A) the employer must have suitable hearing protection available but does not have to enforce its use.

Upper Exposure Action Value - if an employee is exposed to average sound levels during the working day at or above 85dB(A) the employer must provide and strictly enforce the use of suitable hearing protection in the affected zone.

Exposure Limit Value - an employee must not be exposed to average levels greater than 87dB(A) or impulse noise peaks of 137dB(A) after deducting the SNR rating from the actual dB(A) noise level.

HOW TO DECIDE ON PROTECTION LEVELS A SIMPLE GUIDE

If an employee needs to raise their voice to be heard a few feet away then the noise levels are likely to be over 85dB(A) and immediate action should be taken. If in doubt obtain specialist advice. The best way to decide on what level of protection is needed is to arrange a specialist survey from an independent professional.

Level in dB	Typical example of noise	Action
140	Jet Engine	Hearing Protection required
130	Riveting hammer, Gun shot	Hearing Protection required
120	Punch press, Chain saw	Hearing Protection required
110	Nail gun, Blasting	Hearing Protection required
100	Machine shop, Grinding	Hearing Protection required
90	HGV, Band saw	85dB Hearing Protection required
80	Busy traffic, vacuum cleaner	80dB Training and assessment
70	Car driver	No action required
60	Normal office	No action required
40	Low voices	No action required

i Hearing Protection – basic guide

The Personal Protective Equipment at Work Regulations require hearing protection to be supplied when an individual is exposed to noise that will damage hearing and that cannot be reduced by other means.

EN Standards:

EN352-1 Earmuffs

EN352-2 Earplugs and banded products

EN352-3 Helmet maintained earmuffs



SNR

SNR is the 'Simplified Noise level Reduction' or 'Single Number Rating' which is the simplest way of getting a general indication for the level of protection provided. It is generally used to compare different types of hearing protectors. In very simple terms the calculation would be:

Noise level	100dB
Hearing Protector SNR....	30dB
Noise level at ear	70dB

The noise reaching the wearer should not exceed 87dB and preferably lie between 70 - 80dB. This calculation does not take into account different frequencies so may not be the most suitable measurement.

HML is 'High, Medium and Low' and defines the protection at high, medium and low frequencies. The different attenuation values for each frequency range are usually shown on the packaging of the hearing protection. This will be more precise than the SNR value which is based around typical factory noise frequencies and becomes inaccurate particularly when low frequency noises dominate (eg metal pressings).

dB (decibel) is used to measure the sound intensity. Because the human ear can register sounds across a huge range of intensities a linear scale is not suitable for measurement. The dB scale is therefore a logarithmic scale which in very simple terms means the sound intensity roughly doubles for every 3dB increase. An increase of 20dB would increase the sound intensity 100 times, (ie 60dB is 100 times louder than 40dB)

Protection should ideally limit exposure to between 70 - 80dB at the ear and not exceed 87dB. However it is also important not to over protect as the wearer may not be able to hear other important sounds such as fire alarms or vehicles. The user may also feel isolated resulting in reluctance to wear the hearing protection when needed

MAINTENANCE

If your employees use disposable protectors, you should check that supplies are continuously available, and fill dispensers up regularly. If your employees use re-useable ear protections they should be inspected regularly and repaired or replaced as necessary.

CUSTOM MADE EARPLUGS

For the ultimate protection we can supply you with custom fit, personal moulded earplugs. These enable communication without significant hindrance and ensure 100% wear time resulting in optimal protection. They can be fine tuned within 1dB to ensure maximum personalisation taking account of noise levels and the individual's hearing needs. They are leak tested to ensure a perfect fit.



SOUND METERS

Please ask us for details of Sound Meters to assist with in-house monitoring of noise levels.