

# Hearing Protection

## INTRODUCTION

Welcome to our hearing protection selection guide.

This guide sets out the importance of hearing protection in the workplace, explains why noise levels should be controlled and details when hearing protection should be issued to employees. It also includes information on the care and use of different types of hearing protection.



## PERSONAL HEARING PROTECTION

Hearing protection should be issued to employees:

- Where extra protection is needed above what has been achieved using noise control; or
- As a short-term measure while other methods of controlling noise are being developed

## WHY BUY FROM RS?

As industry experts we offer a wide range of hearing protection for every requirement and environment, from professionally-approved RS products, to those from the global market leader 3M. This means you can find all the products you need from one source, with next day delivery, competitive pricing and bulk discounts.

## WHEN IS HEARING PROTECTION REQUIRED AND WHY?

Under The Control of Noise at Work Regulations 2005 employers must provide suitable hearing protection where noise exceeds 80dB(A). In addition, note that as of 21st April 2018 PPE Directive 89/686/EEC was repealed and replaced by new Regulation (EU) 2016/425. This sees a change of classification for hearing protection equipment from product related to risk related. Companies can continue to mark hearing protection equipment to the old 89/686/EEC until April 2019.

## IMPORTANT NOTE

Hearing protection must not be used as an alternative to controlling noise. Employers are duty bound to remove or reduce risks to health and safety from noise at work.

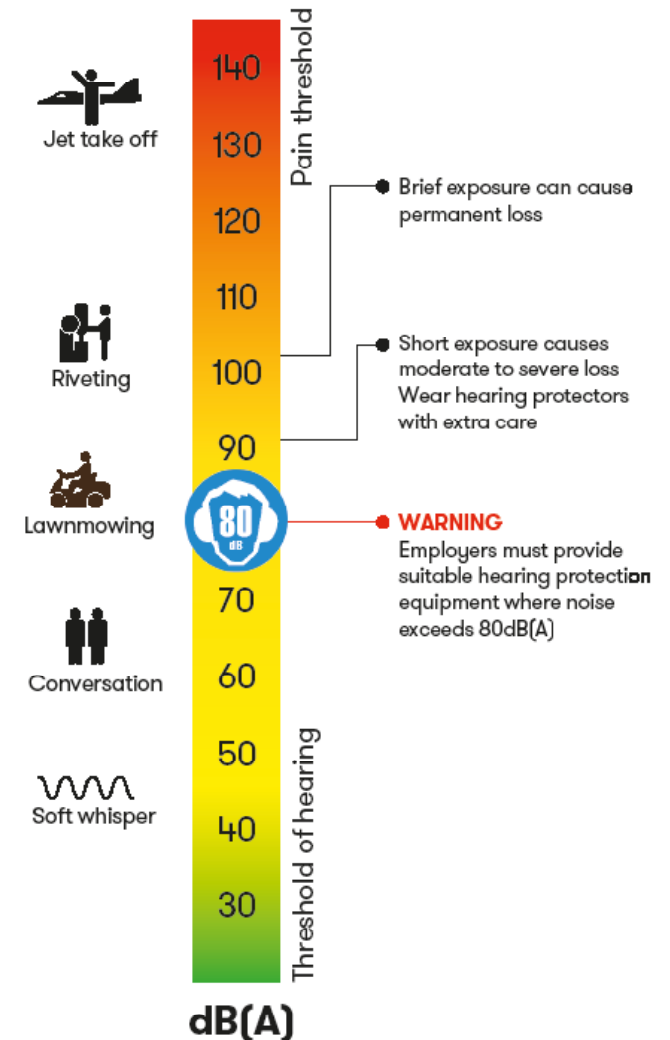
Actions and a risk assessment need to be taken if any of the following apply:

- The noise is intrusive for most of the working day - e.g. vacuum cleaner or busy road
- Voices need to be raised when having a conversation with a person 2 metres away for at least part of the day
- Working with power tools or machinery for more than half an hour a day
- Working in noisy industries, e.g. manufacturing, construction, engineering, road working, entertainment
- Impact noise, e.g. hammering or using pneumatic tools
- Noise from explosive source, e.g. detonators

**Personal hearing protection should ONLY be issued to employees once noise control measures have been taken to minimise noise such as:**

- Using quieter equipment or a quieter process
- Making technical changes to reduce noise at source
- Using screens, barriers, enclosures or absorbent materials
- Limiting employees' time spent in noisy areas

## EASY TO DAMAGE - EASY TO PROTECT



## PASSIVE HEARING PROTECTION

## Disposable Earplugs



Made from expandable, slow-recovery foam and combining comfort with protection. Once in the ear, foam plugs expand to provide a secure and snug custom fit. This type of earplug should usually be disposed of after single use and is available as individual earplugs or as a corded pair.

## BENEFITS AND APPLICATIONS

Popular due to their low-cost, ease of use and comfort. Disposable earplugs provide fast, simple protection against invasive noise in environments such as construction, metal fabrication and factory production.

## TIPS FOR USE

Slowly roll and compress foam earplugs into a very thin cylinder. While compressed, insert the earplug well into the ear canal. Fitting is easier if you reach around the head to pull the ear outward and upward during insertion.

## Reusable Earplugs



Reusable earplugs are made from flexible materials that are preformed to fit the ear. Generally available with a joining cord to prevent loss these reusable earplugs are hygienic, economical and comfortable to wear. No sizing is required. Also available in metal detectable format.

Designed for multiple use, so longer-lasting, more economical and offering higher levels of hygiene and comfort. Can be worn for longer periods.

Reach around the back of your head and pull outward on the ear while inserting the plug until you feel it sealing. This may seem tight at first, especially if you have never worn earplugs before.

## Banded Earplugs (Reusable/ Disposable)



These are easy to use, convenient and extremely comfortable to wear. Easy and quick to put on, take off or store around the neck when not required. These earplugs are ideal for intermittent use.

Ideal for environments where plugs need to be removed intermittently. Headband reduces risk of losing.

Hold the large ends of the pods and swivel them to direct the tips into the ear canal openings. Firmly push and wiggle the pods into the ear canal until a snug seal is obtained. Pulling on the outer ear while pushing the pods will be helpful to most wearers.

## Ear Defenders



Ear defenders consist of rigid cups with soft plastic cushions that seal around the ears to reduce noise. They are a popular choice in hearing protection due to their ease of use and greater levels of comfort. Available in headband, neckband, helmet-attachable and folding models to meet the needs of most applications.

Provide robust protection where higher noise levels present significant risk and require higher attenuation levels: transport, road working, airport, construction, heavy machinery.

Ear defenders must fully enclose the ears to seal against the head. Adjust the headband so cushions exert even pressure around the ears to get the best noise reduction. Pull hair back and out from beneath the cushions. Do not wear caps, store pencils behind the ear, or anything that may break the seal.

## ACTIVE HEARING PROTECTION

## Communication Ear Defenders



Two options are available: Listen Only offers the wearer the ability to press a button on the shell to reduce attenuation allowing them to hear a conversation without removing the ear defenders. Alternatively, Speak & Listen hearing protectors come with either a built-in communication radio for cable-free, short-range communication with other headsets and portable two-way radios which are programmed on the same frequency, or the input to connect a radio receiver and microphone.

## BENEFITS AND APPLICATIONS

Provide high levels of situational awareness and improved safety by allowing users to block out harmful noise whilst continuing to hear alarms and critical communications. Ideal for mining, offshore or transport industries.

## TIPS FOR USE

Without removing, simply use the button on the shell to reduce attenuation levels and hear critical instructions and signals.

## EUROPEAN STANDARDS

European standards which are relevant to the RS range of hearing protection include the following:

**EN352**

Construction, design and performance of hearing protection equipment:

- Part 1: Ear muffs
- Part 2: Ear plugs
- Part 3: Ear muffs attached to a safety helmet
- Part 4: Level dependent ear muffs
- Part 5: Active noise reduction ear muffs
- Part 6: Ear-muffs with electrical audio input
- Part 7: Level dependent ear plugs
- Part 8: Entertainment audio ear muffs

**EN13819**

Testing methods for hearing protectors:

- Part 1: Physical tests
- Part 2: Acoustic tests

**EN55013**

Radio disturbance characteristics of sound and TV broadcast receivers

**EN55020**

Electromagnetic immunity of broadcast receivers and associated equipment

**EN50581**

Assessment of electrical and electronic products with respect to the restriction of hazardous substances

**EN55022**

Radio disturbance characteristics - limits and methods of measurement

**EN55024**

Immunity characteristics - limits and methods of measurement

**EN24869**

Hearing protectors - Subjective method for the measurement of sound attenuation

**EN61000**

Electromagnetic Compatibility (EMC) - Testing and measurement techniques:

- Part 1: General
- Part 2: Environment
- Part 3: Limits
- Part 4: Testing and measurement techniques
- Part 5: Installation and mitigation guidelines
- Part 6: Generic standards

**EN300296**

EMC and radio spectrum matters - land mobile service: radio equipment using integral antennas intended primarily for analogue speech

**EN300328**

EMC and radio spectrum matters - Wideband transmission systems

**EN301489-1**

EMC and radio spectrum matters: standard for radio equipment and services; common technical requirements

**EN301489-17**

EMC standard for radio equipment: specific conditions for broadband data transmission systems

**EN60950**

Safety of information technology equipment

**EN62479**

Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10Mhz to 300Ghz)