



Hearing Protection



Introduction

Take your safety personally



3M, the world's leader in safety and protective equipment, is proud to have the Peltor™ and E-A-R™ Brand range as part of its product offering.

3M™, Peltor™ and E-A-R™ Hearing Protection for noisy and hazardous environments are renowned world leaders. With more than 50 years of experience, the Peltor™ and E-A-R™ together with the 3M Branded hearing portfolio promises superior quality products that provide an optimal balance of comfort and protection.

It is our goal is to ensure that we satisfy your needs through the provision of exceptional leadership, expertise, quality and service excellence. With our global technology, manufacturing and knowledge network we do more than simply develop products that help your workforce to operate in safety and comfort. The advanced engineering and technology inherent with the 3M™, Peltor™ and E-A-R™ Brands fit with the high standard of quality and innovation of a continuously evolving range of product solutions that you, our customers, come to expect from 3M.



Protection all the way

Our mission is to help protect people at work, at home, for life. We believe that health and safety is the priority in any working environment and that greater comfort improves worker protection, resulting in enhanced productivity and safety compliance. In addition to protecting people, our ambition is to protect the environment as well. It is, therefore, our declared goal to develop and use safe products that have the least possible impact on people, the environment and the workplace.

Long lasting innovations

To deliver on our commitment requires a culture of accountability, customer inspired innovation, knowledge and expertise, fuelled by a deep understanding of our customer needs. The 3M™, Peltor™ and E-A-R™ Brands, trusted as leaders in hearing protection, together with the 3M Brand offer a comprehensive line of earplugs, banded earplugs and earmuffs. The products provide optimal fit capability with other personal protection equipment.

Working together

3M is more than just products. We work closely with distributors, safety professionals and companies to protect employees exposed to hazardous environments. With offices around the world, 3M can help our customers succeed everywhere.

Partnership in safety

Many renowned companies have chosen Peltor™ Products for optimum safety at work. With customised printing, embossing and other solutions, our products can also help enhance the value of your brand.

Contents



Contents: Product by attenuation



GREEN Optime™ ALERT SYSTEM

RNR* < 85dB(A)

Hearing protection is not compulsory but is made available to workers for their comfort and protection



YELLOW Optime™ ALERT SYSTEM

83 dB(A) - 93 dB(A)

You are above the level, hearing protection is compulsory.



RED 1 Optime™ ALERT

87 dB(A) - 98 dB(A)

You are above the level, hearing protection is compulsory. Ideal for high frequency noise.



RED 2 Optime™ ALERT SYSTEM

94dB - 105dB(A)

You are above the level, hearing protection is compulsory. Ideal for high and medium frequency noise.



RED 3 Optime™ ALERT SYSTEM

95 dB(A) - 110 dB(A)

You are above the level, hearing protection is compulsory. Ideal for all frequencies.

PLEASE NOTE:

At levels above 95dB(A) you will need an accurate noise assessment to correctly select the product. Green and Yellow marked products are not suitable for use in low frequency noise.

(*RNR = Recommended Noise Rating)

22	E-A-R™ Ultrafit™ 14 Earplugs - SNR 14dB
28	E-A-R™ E-A-Rflex™ 14 Earplugs - SNR 14dB
10	E-A-R™ E-A-Rsoft™ 21 Earplugs - SNR 21dB
22	E-A-R™ Ultrafit™ 20 Earplugs - SNR 20dB
23	E-A-R™ ClearE-A-R™ 20 Earplugs - SNR 20dB
	E-A-R™ Tracer™ 20 Earplugs - SNR 20dB
24	E-A-R™ Ultratech™ Earplugs - SNR 21dB
28	E-A-R™ E-A-Rflex™ 20 Earplugs - SNR 20dB
29	E-A-R™ E-A-Rband™ Earplugs - SNR 21dB
	E-A-R™ Caboflex™ Earplugs - SNR 21dB
10	E-A-R™ Classic™ Earplugs - SNR 28dB
18	E-A-R™ Express™ Earplugs - SNR 28dB
24	3M™ 1261/1271 Earplugs - SNR 25dB
30	E-A-R™ E-A-Rcaps™ Earplugs - SNR 23dB
	E-A-R™ Flexicap™ Earplugs - SNR 23dB
31	3M™ Pulsar™ Earplugs - SNR 23dB
	E-A-R™ Reflex™ Earplugs - SNR 26dB
32	3M™ 1310 Earplugs - SNR 26dB
34	Ultra™ 9000 Earmuffs - SNR 22dB
	E-A-R™ Model 5000™ Earmuffs - SNR 27dB
35	Peltor™ Optime™ I Earmuff - SNR 26/27/28dB (depending on the version)
36	Peltor™ Bulls'eye™ I Earmuff - SNR 27dB
37	Peltor™ H 31 Earmuff - SNR 27/28 dB (depending on the version)
11	E-A-R™ Classic™ Corded Earplugs - SNR 29dB
18	E-A-R™ Pro-Seals™ Earplugs - SNR 29dB
19	3M™ Torque™ Earplugs - SNR 32dB
25	E-A-R™ Tri-Flange™ Earplugs - SNR 29dB
	E-A-R™ Tracers™ Earplugs - SNR 32dB
26	E-A-R™ Ultrafit™ Earplugs - SNR 32dB
38	Peltor™ Optime™ II Earmuff - SNR 30/31dB (depending on the version)
39	Peltor™ Push to Listen™ Earmuff - SNR 29/31dB (depending on the version)
40	Peltor™ Bulls'eye™ II Earmuff - SNR 31dB
11	E-A-R™ Classic™ Soft Earplugs - SNR 36dB
12	E-A-R™ Superfit™ 33 Earplugs - SNR 33dB
	E-A-R™ Superfit™ 36 Earplugs - SNR 36dB
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	3M™ Solar Earplugs - SNR 36dB
15	3M™ 1100/1110 Earplugs - SNR 37dB
	E-A-R™ E-A-Rsoft™ Fx Earplugs - SNR 39dB
19	3M™ No-touch™ Earplugs - SNR 35dB
20	E-A-R™ Push-ins™ Earplugs - SNR 38dB
26	E-A-R™ Ultrafit™ X Earplugs - SNR 35dB
41	Peltor™ Optime™ III Earmuff - SNR 34/35 dB (depending on the version)
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25	E-A-R™ Tri-Flange™ Earplugs - Tracers™ Earplugs
26	E-A-R™ Ultrafit™ Earplugs - Ultrafit™ X Earplugs

3M™ Banded earplugs

28	E-A-R™ E-A-Rflex™ 14 Earplugs - E-A-Rflex™ 20 Earplugs
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31	3M™ Pulsar™ Earplugs - E-A-R™ Reflex™ Earplugs
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3M™ Earmuffs

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EC Noise Legislation

Old Regulations Vs New Regulations Comparison Chart

Old Regulations	dB(A)	New Regulations
Peak Action Level	140	Peak level at Limit Value
	137	Peak level at Upper Exposure Action Value
	135	Peak level at Lower Exposure Action Value
Second Action Level HPE must be provided by employer & the use of HPE strictly enforced at or above the Second Action Level	90	
	87	New Limit Value at ear. Can be achieved with HP
First Action Level HPE must be made available to employees if noise levels exceed the First Action Level.	85	Upper Exposure Action Value HPE must be used where sound level exceeds the Higher Action Value.
	80	Lower Exposure Action Value HPE must be provided to individual workers when Action Value is exceeded.

Under The Control of Noise at Work Regulations 2005 noise legislation employers must provide suitable hearing protection where noise exceeds 80dB(A), all EU member states should have complied with the new directive as of February 2006.

Continued exposure to noise above 80dB(A) may cause permanent hearing damage. Many employees not affected under previous legislation will now have to be considered. For example people working in light industry, utility workers, bar staff and public service employees may now be exposed and must be provided with adequate protection.



Choosing the correct hearing protection for your needs can be difficult; the hearing protectors should neither over nor under protect the user. With this in mind 3M has an easy to use selection system for E-A-R™ and Peltor™ products that aids the correct selection of hearing protection appropriate to the noise level.

Our system uses a simple, logically coloured classification to make the selection process easy. It has its roots in the highly appreciated marking used on the Peltor™ Optime™ range. The difference is that it is wider, i.e. covering more noise situations.

Step by step guide to using the Optime™ Alert System and Sound Check Meter

1.

Measure the noise level

There are several ways of doing this: you may already know what your noise level is, you could get a detailed noise assessment or use the Optime™ Alert System - Sound Check to establish your noise band.

Alternatively you could use the Sound Check. Simply deploy the meter at the employees work station and let it sit until the coloured display has stabilised, this then indicates the average noise level in that area.

	Above 95dB(A) You will need to get a more accurate noise assessment.	
	Above 87dB(A) Products marked with this icon are suitable at this noise level.	
	Between 87 - 93dB(A) Products marked with these icons are suitable at this noise level.	
	Between 83 - 93dB(A) Products marked with this icon are suitable at this noise level.	
	Between 83 - 85dB(A) Products marked with these icons are suitable at this noise level.	
	Between 80 - 85dB(A) Products marked with this icon are suitable at this noise level.	

Optime™ Alert System

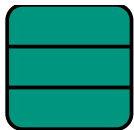


Our system uses a simple, logically coloured classification to make the selection process easy. Firstly find out what your noise level is, then look at the icons below and establish which noise band (RNR) your noise level falls into. Take note of the icon and choose from the wide range of products featuring the correct icon.

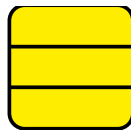
PLEASE NOTE:

At levels above 95dB you will need an accurate noise assessment to correctly select the product. Green and Yellow marked products are not suitable for use in low frequency noise.

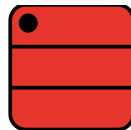
***RNR = Recommended Noise Rating**



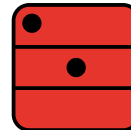
RNR* < 85dB(A)
You do not have to wear hearing protection, but make it available to your workers.



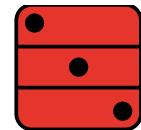
83 dB(A) - 93 dB(A)
You are above the permitted exposure level, hearing protection is compulsory.



87 dB(A) - 98 dB(A)
You are above the permitted exposure level, hearing protection is compulsory. Ideal for high frequency noise.



94dB(A) - 105dB(A)
You are above the permitted exposure level hearing protection is compulsory. Ideal for high and medium frequency noise.



95 dB(A) - 110 dB(A)
You are above the permitted exposure level, hearing protection is compulsory. Ideal for all frequencies.

Sound Check Meter

3M also has a simple sound level indicator for its E-A-R™ and Peltor™ products that complements the Optime™ Alert System by establishing which colour code you need to follow. You simply deploy the meter at the employees work station let it run until the display has stabilised, this then indicates the average noise level in that area and the type of protection suggested.

The display indicates the period of time the unit has been active in 1 hour increments up to a maximum of an 8 hour working day. The Sound Check meter must be restarted between measurements.

Supplied with

- UK Power Supply
- Euro Power Supply
- Optional hard case

Product Code

- Optime™-sound-metuk
- Optime™-sound-meter
- Optime™-sound-case

Hard Storage / Carry Case

This strong, lockable rigid case provides a high level of protection for your Sound Check Meter. The meter is held securely in place by high density foam for protection against impact and vibration. Integral to the lid of the case is a document holder to store records, posters or other documentation.



2.

Identifying the corresponding icon

Using the Sound Check Method

If you are using the Sound Check Meter all you have to do is match up the coloured display with the chart opposite. On the left of the chart it identifies which icon should be exhibited on the hearing protection.

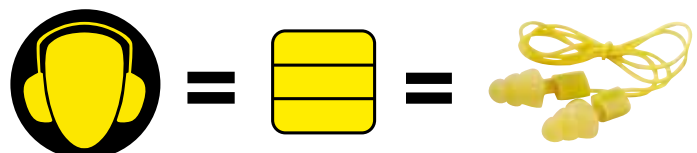
Using your own noise level measurement

If you are using your own measurement or a measurement taken by another competent person then you simply look at the Optime™ Alert System above and identify which RNR - Recommended Noise Rating - your level falls under and record the icon above.

3.

Choosing hearing protection

By now you will know which icon on the Optime Alert System relates to your noise level, simply check the icon next to the related product.



E-A-Rfit™ System

The logo for E-A-Rfit, with 'E-A-R' in yellow and 'fit' in blue, followed by a small trademark symbol.

Wearers' ear canal shapes are different hence fitting methods are different, resulting in different protection levels. To help you understand the individual protection needs of each wearer, use the new E-A-R™ Validation System by 3M.



Innovative F-mire process is quick simple and accurate

Unlike conventional tone response tests, E-A-Rfit™ system is an F-MIRE (field-microphone-in-real-ear) test. Key features to this innovative system are:

- **Exclusive Probed E-A-R™ Hearing Protectors**
Including a selection of foam and pre-moulded products (see bottom of page).
- **Dual Element Microphone**
Measures sound inside and outside the ear.
- **Advanced Algorithm**
Utilises transfer function measurement approach to acquire reliable data in less than eight seconds.
- **Proprietary Application Software**
Provides enhanced metrics for guidance in the application of the measured insertion loss values.



Real Fit = Real Results

The subject fits their own protector for actual on the job readings. The technician then connects the microphone to the hearing protector's tube, leaving the other microphone exposed so that noise levels are measured inside and outside the ear.



Personal Attenuation Rating (PAR) For Each Worker In Minutes

It only takes eight seconds to obtain data at seven standard (125Hz to 8000Hz) frequencies. You'll know the level of protection each worker receives from each tested protector.



Data Is Documented For Future Reference

Each worker's personal attenuation rating (PAR) results will be automatically documented and stored by the technician. This information is valuable for comparison during subsequent tests and prove useful if later called upon to provide it . A copy of the results will also be provided to your company's Hearing Conservation Manager.



Test Compatible With A Variety of E-A-R™ Hearing Protectors

Protection levels can be validated with many different E-A-R™ Hearing Protectors. This selection includes specially-probed versions of foam and premoulded earplugs.



E-A-Rfit™ compatible Earplugs





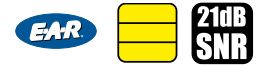


Roll Down Earplugs

Roll down earplugs, made from expandable slow-recovery foam, provide the best combination of comfort and protection for most users. Once in the ear, foam plugs expand to provide a snug and secure custom fit. 3M provide a wide range of disposable roll down PU earplugs to choose from to help you find the best solution for your individual needs.

3M™ Roll Down Earplugs

E-A-R™ E-A-Rsoft™ 21 Earplugs



For noise levels up to 93dB(A) the E-A-Rsoft™ 21 Earplug is the ideal disposable hearing protector. It provides the correct hearing protection level whilst being easy to use. It simply pushes into the ear canal, requiring no roll down and helps ensure a correct fit.



Available with cord	X
Moisture Resistant	X
Reusable	X
Metal Detectable	X
Slow recovery foam	✓
No roll down required	✓

Product	Product code
E-A-Rsoft 21	ES-01-009

E-A-R™ Classic™ Earplugs



E-A-R™ Classic Earplugs are made from a soft energy absorbing polymer foam which provides excellent hearing protection and all day comfort. Ideal for use where noise is a problem, either in work or leisure activities.

E-A-R™ Classic Small Earplugs are also available for users who are looking for all the benefits of the standard size but who want greater comfort in smaller ear canals.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	X
Slow recovery foam	✓
No roll down required	X

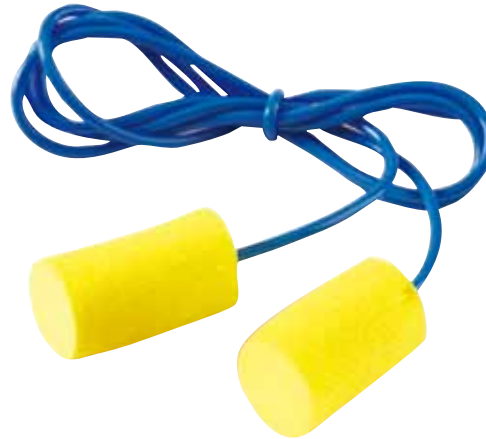
Product	Product codes
Pillow Pack	PP-01-002
5 Pair	FP-01-000
One Touch Refill	PD-01-001
One Touch Top Up	PD-01-009
Classic Small	AM-01-000

Full attenuation data available on page 48



E-A-R™ Classic™ Corded Earplugs

E-A-R™ Classic Corded Earplugs offer all the benefits of the E-A-R™ Classic Earplug, with the addition of an easy-to-see blue vinyl cord.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✗

Product
Classic Corded

Product code
CC-01-000

E-A-R™ Classic™ Soft™ Earplugs

As the foam warms to the body temperature, it becomes softer and shapes to the individual's ear canal. This 'shaping' allows the earplugs to form an excellent seal against noise, and as time goes on, the foam continues to soften for added comfort.



Available with cord



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✗

Product
Pillow Pack
Uncorded Polybag
Corded
5 Pair
One Touch Refill

Product codes
PP-01-800
PR-01-004
PR-01-005
FP-01-800
PD-01-800

3M™ Roll Down Earplugs

E-A-R™ Superfit™ Earplugs

E-A-R™ SuperFit™ Earplugs are the only earplug with the unique 'fitting ring' to which identifies when the earplug is correctly fitted. When no orange colour is visible, the best fit is achieved. E-A-R™ SuperFit™ 36 Earplug is ideal for those looking for higher attenuation. E-A-R™ Superfit™ 33 Earplug is smaller in diameter and height to fit smaller ear canals, or those looking for slightly lower attenuation.

Available with cord	X
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	X
Slow recovery foam	✓
No roll down required	X



Superfit 33 Earplug

Product	Product codes
Pillow Pack	SF-01-000
One Touch Refill	PD-01-007

Superfit 36 Earplug

Product	Product code
Superfit 36	SF-01-003

3M™ 1120 / 1130 Earplugs

A unique articulated shape for optimum fit, particularly useful for short or narrow ear canals. The soft hypoallergenic foam material provides maximum comfort and low pressure inside the ear. Its special formulation material makes these plugs less prone to soak up water in humid environments to maintain performance. The smooth surface helps prevent picking up unwanted dirt for a more hygienic fit.

The soft braided cord (1130 only) helps to remove plugs after use and prevent their loss.

Available with cord	✓
Moisture Resistant	X
Compatible with other PPE	✓
Reusable	X
Metal Detectable	X
Slow recovery foam	✓
No roll down required	X



Product	Product codes
Uncorded	1120
Corded	1130
Refill Bag	1120R



E-A-R™ E-A-RSoft™ Yellow Neons Earplugs

E-A-R™ E-A-Rsoft™ Earplugs are made from a slow expanding, polyurethane foam material. A plug that gives evenly distributed pressure allowing flexibility and a good seal with optimum comfort. E-A-R™ E-A-Rsoft™ Yellow Neons Earplugs are also available with a blue vinyl connecting cord.



Available with cord



Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✗

Product

Uncorded
Corded
One Touch Refill
One Touch Top Up

Product codes

ES-01-001
ES-01-005
PD-01-002
PD-01-010

E-A-R™ E-A-RSoft™ Blasts Earplugs

E-A-R™ E-A-Rsoft™ Blasts Earplugs are made from a slow expanding, polyurethane foam material. A plug that provides evenly distributed pressure, giving flexibility, a good seal with optimum comfort.



Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✗

Product

Uncorded
One Touch Refill
One Touch Top Up

Product codes

ES-01-003
PD-01-003
PD-01-012

3M™ Roll Down Earplugs

E-A-R™ E-A-RSoft™ Metal Detectable Earplugs

The E-A-R™ E-A-RSoft™ Metal Detectable Earplug has all the advantages of the E-A-R™ E-A-RSoft™ Earplug with the added benefits of a blue metal detectable cord and an integral stainless steel ball in the non-food blue earplug. Ideal for use in the food manufacturing industries.



Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✓
Slow recovery foam	✓
No roll down required	✗

Product	Product code
Corded	ES-01-011A

3M™ Solar™ Earplugs

3M™ Solar™ Earplugs come in a choice of eye-catching colours: orange, red, pink, and purple earplugs in one convenient dispenser box. Ultra-soft foam formulation for comfortable all-day wear, plus a tapered shape for easy insertion and excellent canal-hugging seal. Available with or without 'LiveWire' cord.



Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✗

Product	Product codes
Uncorded	PN-01-001
Corded	PN-01-002
One Touch Refill	PN-01-011

Full attenuation data available on page 50



3M™ 1100 / 1110 Earplugs

The Soft hypoallergenic foam material provides maximum comfort and low pressure inside the ear. Its smooth, dirt resistant surface provides better hygiene, durability and comfort. The tapered design fits most ear canals and makes the plugs easier to use. A polyester cord (1110) helps to remove the plugs after use and to prevent their loss.



Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✗

Product	Product codes
Uncorded	1100
Corded	1110
Refill Bag	1100R

E-A-R™ E-A-RSoft™ FX Earplugs

The E-A-R™ E-A-RSoft™ FX Earplug is the highest protecting earplug in our range today (SNR 39). Its smooth tapered finish makes fitting easier and helps form a comfortable fit. The flange shape, when rolled down, serves as a very effective insertion device. This makes the earplug very easy to fit.



Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✗

Product	Product codes
Uncorded	ES-01-020
Corded	ES-01-021

Dispensers



One-Touch™ Dispenser

You can now buy many of the E-A-R™ Disposable Earplugs in refills for the innovative One-Touch™ Dispenser. Easy to use with a simple twist motion, the innovative 'no waste funnel' ensures plugs drop directly into the palm, dispensing E-A-R™ Disposable Earplugs every time.

Unobstructed access from front or either side permits one hand operation by a clockwise or anticlockwise motion.

Most of E-A-R™ Disposable Earplugs are available in both refills and top up boxes.



Product code
PD-01-000

Refill Bottles

Top Up Box



E-A-R™ Classic Ear Plugs

E-A-R™ E-A-Rsoft Neons Ear Plugs

E-A-R™ E-A-Rsoft Blasts Ear Plugs

E-A-R™ Superfit 33 Ear Plugs

E-A-R™ Classic Soft Ear Plugs

E-A-R™ Peltor Next Solar Ear Plugs

3M™ Earplug Dispenser

3M™ 1100DP Dispenser:
your dispenser for 1100 plugs

3M™ 1120DP Dispenser:
your dispenser for 1120 plugs

Packed together with 1000 pairs

Catch tray included to help keep ear plugs off the floor

Low cost plastic refill bags available



E-A-R™ Wall Mounted Dispenser Holder



A permanent E-A-R™ Earplug Dispenser, serving as a reminder to wear hearing protection and make E-A-R™ Earplugs readily available in noisy areas for full time users and visitors alike. This plastic dispenser is easy to fix to a wall or other permanent position. Holds 250 pair dispenser of E-A-R™ Classic™ Pillow Packs.



Product code
PD-01-002



Pod Earplugs

Pod earplugs are very easy to insert since there is no roll needed, just use the soft flexible grip to push the earplug into position and achieve excellent protection. Because you do not have to touch the foam during fitting it is one of the most hygienic types of earplug available.

3M™ Pod Earplugs

E-A-R™ Express™ Earplugs

The unique pod design of the E-A-R™ Express™ Earplug allows the foam to compress easily so that the plug slides gently into the ear and expands slowly, making an effective seal for most ear canals. The insertion grip makes handling easier. Available with or without a cord.

Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✓



Available with cord



Product	Product codes
Uncorded	EX-01-002
Corded	EX-01-001

E-A-R™ Pro-Seals™ Earplugs

E-A-R™ Pro-Seals™ Earplugs provide consistent attenuation. No roll-down is required. This reusable plug has a flexible stem for easy insertion that also helps to prevent the build up of dirt. The soft, smooth foam provides maximum comfort and is designed to provide optimum performance.

Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓



Available with cord



Product	Product codes
Uncorded	DM-01-000
Corded	DM-01-001

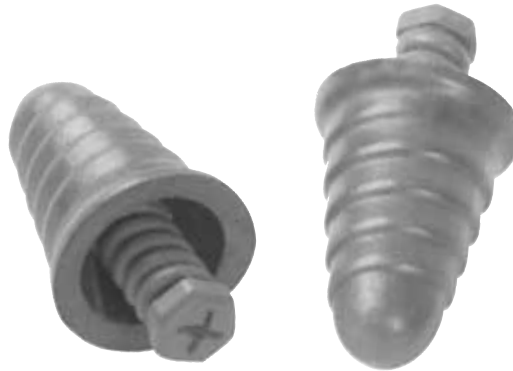


3M™ Torque™ Earplugs

3M™ Torque™ Earplugs perform as tough as they look by providing excellent protection for noisy environments. The metallic colouring makes the earplugs look solid, but they are made from ultra-soft foam that provides day long comfort. The screw 'threads' are moulded into the foam for more than looks, twisting the plug while pushing into the ear canal can achieve an effective seal.



Available with cord



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✓

Product	Product codes
Uncorded	PN-01-008
Corded	PN-01-009

3M™ No-Touch™ Earplugs

Ease of use for you, these bright pink earplugs are soft, shaped and ready for immediate use – right out of the packet. No roll down required. Just grab the LiveWire stem for a firm, deep and hygienic insertion. Available with or without LiveWire cord.



Available with cord



Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✓

Product	Product codes
Uncorded	PN-01-003
Corded	PN-01-004

E-A-R™ Push-Ins™ Earplugs

The E-A-R™ Push-Ins™ Earplugs revolutionise hearing protection with more advantages than many other foam earplugs. No roll down is required, a gentle push is all it takes for easy, consistent insertion and the flexible stem improves hygiene. The E-A-Rform™ Foam Tip is shaped and sized to mould comfortably to fit most ear canals.

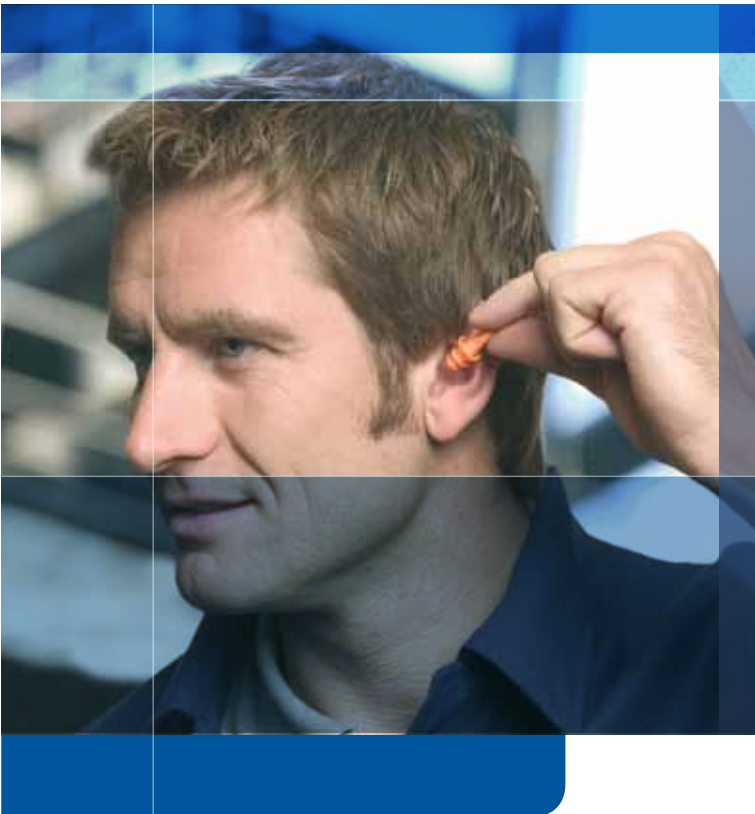
Available with cord	✓
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✗
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✓



Available with cord



Product	Product codes
Uncorded	EX-01-021
Corded	EX-01-020



Pre Moulded Earplugs

Pre-moulded plugs are made from flexible materials that are preformed to fit the ear. They are generally available with a joining cord to prevent loss. These reusable earplugs are comfortable, hygienic and economical. No sizing is required for these pre-moulded, triple flange earplugs.

Available in a variety of styles and protection levels.

3M™ Pre Moulded Earplugs

E-A-R™ Ultrafit™ 14 Earplugs

New Low Attenuation reusable ear-plug made from hypoallergenic silicone rubber. The E-A-R™ UltraFit™ 14 Earplug uses unique filter technology to take the edge off low levels of harmful noise whilst allowing normal conversations or listening to broadcast music.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓

Product Ultrafit 14 | **Product code** UF-01-015

E-A-R™ Ultrafit™ 20 Earplugs

The E-A-R™ Ultrafit™ 20 Earplug is ideal in lower noise levels. Correctly matched to the noise level it allows conversation and background music to be heard whilst helping to protect the user from hearing loss.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓

Product Ultrafit 20 | **Product code** UF-01-012



E-A-R™ ClearE-A-R™ 20 Earplugs



The E-A-R™ ClearE-A-R™ 20 Earplug has been developed to offer optimum attenuation in medium risk areas without adversely affecting communication with your colleagues or customer. The high precision filter controls the flow of sound to maintain a connection with the outside world. The E-A-R™ ClearE-A-R™ 20 Earplug is transparent and has a shorter stem for workers who want their hearing protection to be almost invisible.



Available with cord	✗
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓

Product	Product code
ClearE-A-R 20	UF-01-021

E-A-R™ Tracer™ 20 Earplugs



The E-A-R™ Tracer™ 20 Earplug is ideal in lower noise levels. This low attenuating metal detectable earplug is ideal for use in the food manufacturing industry or anywhere contamination needs to be considered. The E-A-R™ Tracer™ 20 Earplug contains a non ferrous filter and has a fully metalised detectable cord in non-food colour blue.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✓
Slow recovery foam	✗
No roll down required	✓

Product	Product code
Tracer 20	TR-01-001

3M™ Pre Moulded Earplugs

E-A-R™ UltraTech™ Earplugs

E-A-R™ UltraTech™ Earplugs greatly improve the ability to perceive speech, warning signals and machinery noise whilst reducing harmful noise levels effectively. E-A-R™ UltraTech™ Earplugs come complete with a case and vinyl cord for use when appropriate.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓



Product	Product codes
Ultratech	UT-01-003
Corded	UT-01-005

3M™ 1261 / 1271 Earplugs

Convenient storage case with belt clip helps keep plugs convenient, clean and protected in between use. Polyester cord (1271) helps prevent loss, and ensures product is available when required thus making it more convenient for intermittent use. Finger grip design improves ease of insertion and one size fits majority wearers.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓



Product	Product codes
Uncorded	1261
Corded	1271



3M™ Tri-Flange™ Earplugs

Soft, flexible flanges adapt to the shape of the ear canal to form a triple-seal against noise. The plastic LiveWire stem allows for quick, clean and optimal insertion for maximum protection. Choose from a vinyl or woven LiveWire cord.



Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓

Product	Product codes
Vinyl Cord	PN-01-005
Cotton Cord	PN-01-006

E-A-R™ Tracer™ Earplugs



Tracer earplugs offer the same features as E-A-R™ UltraFit™ Earplugs (see page 26) whilst also being metal detectable. In addition they incorporate an easy to see blue metal detectable vinyl cord, the only colour classified as non-food colour. This makes them ideal for the food manufacturing industry.

Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✓
No roll down required	✓



Product	Product code
Tracer	TR-01-000

3M™ Pre Moulded Earplugs

E-A-R™ Ultrafit™ Earplugs

For occasions when the convenience and permanence of a pre-moulded earplug is more suitable for your requirements. The unique one size E-A-R™ UltraFit™ Earplug fits most ear canals comfortably and provides a high level of attenuation.

Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓



Product	Product code
Ultrafit	UF-01-000

E-A-R™ Ultrafit™ X Earplugs

The E-A-R™ UltraFit™ X Earplug features the new innovative pistol grip stem, its angled shape is designed to give wearers improved fingertip control and aid ease of fit. This superb reusable earplug comes packaged in a plastic reusable container providing hygienic storage. Made from a polymer formulation, the comfortable triple flanged tip provides the excellent SNR of 35dB one of the highest offered in pre-moulded earplugs.

Available with cord	✓
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✗
No roll down required	✓



Product	Product codes
Uncorded	UF-01-013
Corded	UF-01-014



Banded Earplugs

Banded hearing protectors are easy to use, convenient and extremely comfortable. They are quick to put on and off and to store around the neck when not required, making them ideal for intermittent use.

Banded hearing protectors offers simplicity to help ensure that your workers are receiving the right level of protection. Most models are available with replacement pods making them a more cost-effective option.

3M™ Banded Earplugs

E-A-R™ E-A-RFlex™ 14 Earplugs

The new Low Attenuation E-A-R™ E-A-Rflex™ 14 Earplug is a convenient banded ear-plug. This product is fully washable enabling you to re-use. The low attenuation helps to provide optimum protection and at the same time helps to overcome wearer isolation.

Available with cord	X
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	X
Slow recovery foam	X
No roll down required	✓



Product | **Product code**
E-A-RFlex 14 | RF-01-014

E-A-R™ E-A-RFlex™ 20 Earplugs

For noise levels up to 93dB(A) the E-A-R™ E-A-Rflex™ 20 Earplug provides optimum attenuation without blocking conversation and broadcast music. E-A-R™ E-A-Rflex™ Earplugs can be stored around the neck when not in use.

Available with cord	X
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	X
Slow recovery foam	X
No roll down required	✓

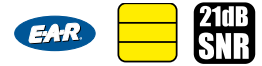


Product | **Product code**
E-A-RFlex 20 | RF-01-003



E-A-R™ E-A-RBand™ Earplugs

A comfortable, economic alternative to earmuffs and earplugs. This innovative new semi-aural hearing protector follows leading brand music headphone designs to provide you with a sleek, stylish, ergonomic and cool way to protect your hearing.



Replacement Pods Available



Available with cord	✗
Moisture Resistant	✗
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✓

Product

E-A-RBand
Replacement pods
Bulk Replacement pods

Product codes

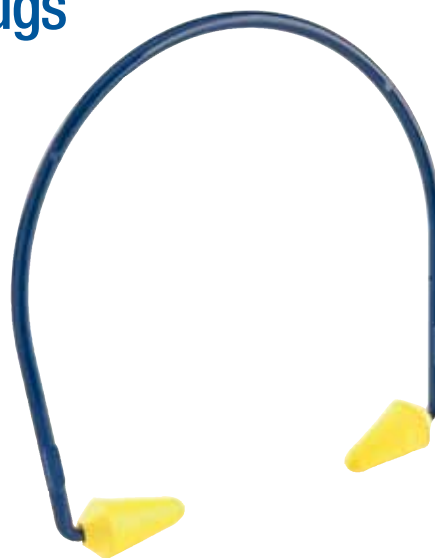
EB-01-000
ES-01-300
ES-01-301

E-A-R™ Caboflex™ Earplugs

This lightweight, semi-aural hearing protector is ideal when moving in and out of high noise areas, fitting comfortably around the neck when not in use. Each conical shaped insert swivels to align with the ear canal, providing a move-resistant seal against noise.



Replacement Pods Available



Available with cord	✗
Moisture Resistant	✓
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✗
Slow recovery foam	✓
No roll down required	✓

Product

Caboflex
Replacement pods

Product codes

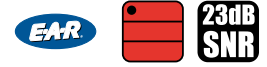
CF-01-000
CS-01-000

3M™ Banded Earplugs

E-A-R™ E-A-RCaps™ Banded Earplugs

One of the lightest semi-aural hearing devices on the market. E-A-R™ E-A-RCaps™ Earplugs provide day long protection for workers exposed to noise and are ideal as disposable protectors for factory visitors. Replacement pods are available.

Available with cord	✘
Moisture Resistant	✘
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✘
Slow recovery foam	✓
No roll down required	✓



Replacement Pods Available



Product	Product codes
E-A-Rcap	EC-01-000
Replacement Pods	ES-01-300
Bulk Pods	ES-01-301

E-A-R™ Flexicap™ Banded Earplugs

E-A-R™ FlexiCap™ Earplugs feature the innovative, hinged headband allowing for a variety of wearing positions without compromising other forms of personal protective equipment. The pod features the soft, smooth polyurethane cap design of our popular semi-aural E-A-R™ E-A-RCaps™ Earplug.

Available with cord	✘
Moisture Resistant	✘
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✘
Slow recovery foam	✓
No roll down required	✓



Replacement Pods Available



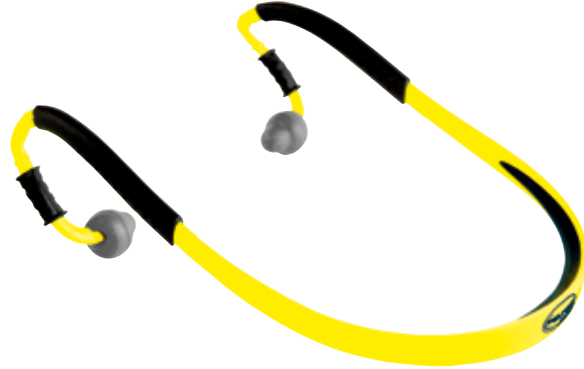
Product	Product codes
Flexicap	FX-01-000
Replacement Pods	ES-01-300
Bulk Pods	ES-01-301



3M™ Pulsar™ Banded Earplugs



The ergonomic neckband and comfortable dual moulding provides good stability, grip and comfort. Even in harsh working environments the 3M™ Pulsar™ Banded Earplug provides consistent fit and attenuation due to the ComforTip pods. The 3M™ Pulsar™ Banded Earplug combines attractive design and excellent performance.



Available with cord	X
Moisture Resistant	X
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	X
Slow recovery foam	✓
No roll down required	✓

Product	Product code
Pulsar	PN-01-010A

E-A-R™ Reflex™ Banded Earplugs



The E-A-R™ Reflex™ multi-position Banded Earplug has an innovative hinged headband allowing for a variety of wearing positions. Featuring E-A-R™ E-A-RForm™ Foam Tip, a unique proprietary material that offers excellent attenuation. E-A-R™ Reflex™ Earplug is quick to fit and can easily be worn with other protective equipment.

Replacement Pods Available



Available with cord	X
Moisture Resistant	X
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	X
Slow recovery foam	✓
No roll down required	✓

Product	Product codes
Reflex	RF-01-000
Replacement Pods	RS-01-000

3M™ Banded Earplugs

3M™ 1310 Earplugs

The unique flexible band allows for easy manipulation and together with the soft round shape foam ear plugs provides reduced pressure and a comfortable seal. The 3M™ 1310 Earplug is very lightweight (13g) and has easy to replace foam plug tips (3M™ 1311 Replacement Pods). Designed to fit behind the head or under the chin with minimal contact with clothing.

Available with cord	✘
Moisture Resistant	✘
Compatible with other PPE	✓
Reusable	✓
Metal Detectable	✘
Slow recovery foam	✓
No roll down required	✓



Replacement Pods Available



Product	Product codes
1310	1310
Replacement Pods	1311



Passive Earmuffs

Earmuffs 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 comfort. They are available in headband, neckband, helmet-attachable and folding models to meet the needs in most common applications.

3M™ Passive Earmuffs

3M™ Ultra™ 9000 Earmuff

The flat attenuation of the 3M™ Ultra™ 9000 Earmuff gives wearers the advantage of being able to hear conversation and other critical sounds more clearly than when wearing most other protectors. The unique level-dependent acoustic system also “reacts” and protects when high noise levels occur. No batteries to go flat or electronics involved.

Dielectric	✓
Neck band	✗
Folding headband	✗
Helmet mounted	✗
Hi-viz	✗
Liquid filled sealing ring	✗
Hygiene Kit	✗



Product

Ultra 9000
Replacement Cushions
Replacement inner liners

Product codes

MU-01-000
MS-01-000
MU-01-001

3M™ Model 5000™ Earmuff

This lightweight general-purpose dielectric earmuff is ideal for daylong use and suitable for most industries other than those subjected to the loudest noise levels. The 3M™ Model 5000™ Earmuff is easily adjusted but retains the chosen position with the innovative ‘twist and lock’ mechanism.

Dielectric	✓
Neck band	✗
Folding headband	✗
Helmet mounted	✗
Hi-viz	✗
Liquid filled sealing ring	✗
Hygiene Kit	✗



Product

Without Headband cushion
With Headband cushion

Product codes

MS-01-005
MS-01-006



Peltor™ Optime™ I Earmuff



Peltor™ Optime™ I Earmuff offers versatile protection and is very lightweight providing high wearer comfort. It combines a low profile with generous inner depth which makes it easy to combine with other equipment, allowing the ear to rest comfortably. Peltor™ Optime™ I Earmuff is your choice for both short and long duration tasks. The wide, comfortable sealing rings are filled with a unique combination of fluid and foam, which gives optimum sealing and low contact pressure at the same time. It is ideal for use in environments with moderate industrial noise, such as workshops, sheet-metal shops and printing works, but also suitable outdoors, such as lawn mowing or in connection with hobby and leisure activities.

This also available in dielectric version with no visible parts.

Available in Hi-Viz green for workers who need hearing protection and be extra visible – on road construction sites, airports or other high-risk workplaces.

Please see page 46 for approved combinations of Peltor™ Hearing and Helmets according to EN 352-3.



Headband



Folding Headband



Neckband



Dielectric (Option)	✓
Neck band	✓
Folding headband	✓
Helmet mounted	✓
Hi-viz	✓
Liquid filled sealing ring	✓
Hygiene Kit	✓

Product	Product codes
Headband	H510A
Neckband	H510B
Folding Headband	H510F
Helmet Attachment	H510P3*
Hygiene Kit	HY51



Hi-Viz



P3* - Helmet Attachment

3M™ Passive Earmuffs

Peltor™ Bull's Eye™ I Earmuff

The Peltor™ Bull's Eye™ I Earmuff has been designed in co-operation with world class sportspeople in order to develop a hearing protector that works for marksmen. As an example, the lower part of each cup is bevelled to avoid interference between the hearing protector and the rifle butt.

The attenuation of the hearing protector is sufficient to ensure protection in most high noise situations without being too bulky. It is essential that hearing protection is comfortable to build wearer acceptance. It is critical that protection is worn when exposed to noise and not to distract when shooting. To achieve this, the Peltor™ Bull's Eye™ I Earmuff has wide comfortable sealing rings which are filled with a combination of fluid and foam, giving optimum sealing and low contact pressure. The muff has a collapsible headband for easy and protective storage in a pocket or bag.



Folding Headband Red



Dielectric	✗
Neck band	✗
Folding headband	✓
Helmet mounted	✗
Hi-viz	✗
Liquid filled sealing ring	✓
Hygiene Kit	✓

Product

Headband Red
 Headband Green
 Headband Black
 Hygiene Kit
 Hygiene kit Military Green

Product codes

H515FB-516-RD
 H515FB-516-GN
 H515FB-516-SV
 HY51
 HY51 GN



Folding Headband Green



Folding Headband Black



Peltor™ H31™ Optime™ I Earmuff



**27dB
SNR**

A low, slimmed down hearing protector ideal for use in forestry, sawmills and industry. It is a comfortable product with excellent attenuation which has a low contact pressure, close to the head position, with no protruding parts.

This earmuff cup has a recess at the top making it a more comfortable fit with hard hats. The wide, comfortable sealing rings are filled with a unique combination of fluid and foam, providing optimum sealing and ideal comfort even during long periods of use. The sealing rings have ventilation canals and are coated with specially designed soft, patterned hygienic foam.

Please see page 46 for approved combinations of Peltor™ Hearing and Helmets according to EN 352-3.



Headband



Neckband

**27dB
SNR**

Dielectric (Option)	✓
Neck band	✓
Folding headband	✗
Helmet mounted	✓
Hi-viz	✓
Liquid filled sealing ring	✓
Hygiene Kit	✓



P3* - Helmet Attachment

**28dB
SNR**

Product

Headband
Neckband
Helmet Attachment
Hygiene Kit

Product codes

H31A 300
H31B 300
H31P3* 300
HY52



3M™ Passive Earmuffs

Peltor™ Optime™ II Earmuff



The Peltor™ Optime™ II Earmuff has been developed for demanding noisy environments and muffles even extremely low frequencies to a maximum degree. The sealing rings are filled with a unique combination of liquid and foam. The result is an optimum seal with low contact pressure, which provides agreeable comfort even during long-term use. The sealing rings have ventilation channels and are covered with soft, patterned, hygienic foam.

Peltor™ Optime™ II Earmuff is a suitable choice for environments with substantial industrial noise or construction machinery, airports and agricultural work. The product is also available in a dielectric version without visible metal parts and in Hi-Viz green for workers who need hearing protection and to be extra visible – on road construction sites, airports or other high-risk workplaces.

Please see page 46 for approved combinations of Peltor™ Hearing Protection and Helmets according to EN 352-3.



Headband



Folding Headband



Neckband

Dielectric (Option)	✓
Neck band	✓
Folding headband	✓
Helmet mounted	✓
Hi-viz	✓
Liquid filled sealing ring	✓
Hygiene Kit	✓



Product

- Headband
- Neckband
- Folding Headband
- Helmet Attachment
- Hygiene Kit

Product codes

- H520A
- H520B
- H520F
- H520P3*
- HY52



Hi-Viz



P3* - Helmet Attachment





Peltor™ Optime™ Push To Listen Earmuff



A whole new series of passive hearing protectors with a manual listening function is available. The design is as simple as it is clever - pressing a button on the shell enables you to reduce attenuation to hear a conversation. This addresses one of the strongest needs at workplaces that require extremely powerful passive hearing protectors by allowing communication with colleagues without removing or lifting any of the hearing protector cups from the ear to avoid the risk of hearing impairment.

The Peltor™ Optime™ Push To Listen Earmuff means no more cup lifting, it is an "Electronicpassive" muff – which has one passive side and one electronic side. Simply push the button to listen, opening up the ear defender for communication. The electronic function automatically shuts off after 30 seconds and can be manually adjusted to close earlier if needed. The product is also available in Hi-Viz green for workers who need hearing protection and be extra visible – on road construction sites, airports or other high-risk workplaces.

Please see page 46 for approved combinations of Peltor™ Hearing and Helmets according to EN 352-3.



Headband



P3*- Helmet Attachment



Dielectric	✗
Neck band	✗
Folding headband	✗
Helmet mounted	✓
Hi-viz	✓
Liquid filled sealing ring	✓
Hygiene Kit	✓

Product

Headband
 Hi-Viz Headband
 Helmet Attachment
 Hi-Viz Helmet Attachment
 Hygiene Kit

Product codes

MT155H530A 380
 MT155H530-489-GB
 MT155H530P3 380
 MT155H530P3E-490-GB
 HY53 - PTL



Hi-Viz

3M™ Passive Earmuffs

Peltor™ Bull's Eye™ II Earmuff



31dB
SNR

The Peltor™ Bull's Eye™ II Earmuff is a hearing protector for intensive noise environments or situations. The product is very comfortable to wear even over longer periods with a weight of 230 grams. With its thin and collapsible headband it offers great convenience. The Peltor™ Bull's Eye™ II Earmuff is available in three different colours red, green and black.



Dielectric	X
Neck band	X
Folding headband	✓
Helmet mounted	X
Hi-viz	X
Liquid filled sealing ring	✓
Hygiene Kit	✓

Product

Headband Red
Headband Green
Headband Black
Hygiene Kit Military Green
Hygiene Kit Black

Product codes

H520F-440-RD
H520F-440-GN
H520F-440-SV
HY52 GN
HY52



Folding Headband Red



Folding Headband Black



Folding Headband Green





Peltor™ Optime™ III Earmuff



The Peltor™ Optime™ III Earmuff is a high performance hearing protector and has been developed for use in extremely noisy environments. The protection is based on a technology with a double casing minimising resonance in the holder casing resulting in maximum high-frequency attenuation.

An acoustic connection between the inner volume and the volume between the casings in its turn provides maximum low-frequency attenuation.

The sealing rings are broad and filled with soft plastic foam for the best fit and low contact pressure. The Peltor™ Optime™ III Earmuff stands for effective protection and highest comfort for the wearer.

The product is also available in dielectric version without visible metal parts and in Hi-Viz green for workers who need hearing protection and be extra visible – on road construction sites, airports or other high-risk workplaces.

Please see page 46 for approved combinations of Peltor™ hearing and helmets according to EN 352-3.



Headband



Neckband



P3* Helmet Attachment

Dielectric	✓
Neck band	✓
Folding headband	✗
Helmet mounted	✓
Hi-viz	✓
Liquid filled sealing ring	✗
Hygiene Kit	✓

Product

- Headband
- Neckband
- Helmet Attachment
- Hygiene Kit

Product codes

- H540A
- H540B
- H540P3*
- HY54



Hi-Viz

3M™ Passive Earmuffs

Peltor™ Bull's Eye™ III Earmuff



35dB
SNR

The Peltor™ Bull's Eye™ III Earmuff is a hearing protector with extremely high attenuation for highly intensive noise environments or situations where your concentration needs to be protected from distracting sounds. The wide, soft, padded headband provides optimal comfort even during long hours of use with a weight of 285 grams.

The Peltor™ Bull's Eye™ III Earmuff is available in green.

Dielectric	X
Neck band	X
Folding headband	X
Helmet mounted	X
Hi-viz	X
Liquid filled sealing ring	X
Hygiene Kit	✓

Product

Headband
Hygiene Kit Military Green

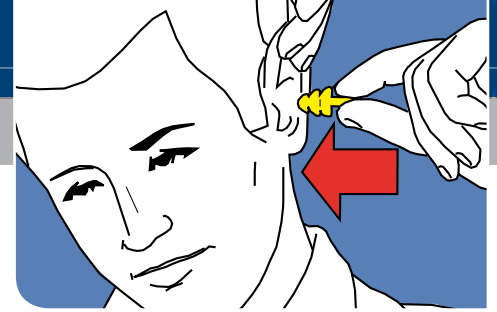
Product codes

H540A-441-GN
HY54 GN



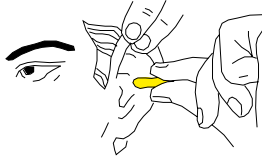
Headband

3M™ Technical Information



Hearing Protection Use and Care

Roll Down Earplugs

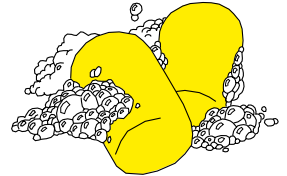


How to use

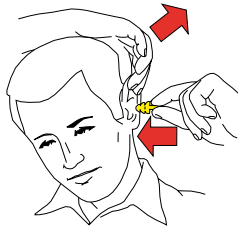
Slowly roll and compress foam earplugs into a very thin cylinder. While compressed, insert the earplug well into the ear canal. Fitting is easier if you reach around the head to pull the ear outward and upward during insertion.

Care and cleaning

Keep the earplugs clean and free from material that can irritate the ear canal. They may be washed in mild liquid detergent and warm water. Squeeze excess water from the plugs and air dry. Washing may be repeated several times. Discard the earplugs if they noticeably change their firmness or do not re-expand to their original size and shape.

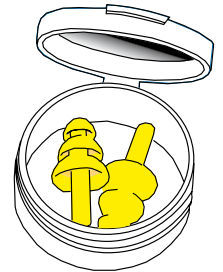


Reusable Pre Moulded Earplugs

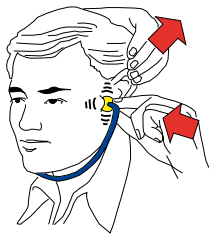
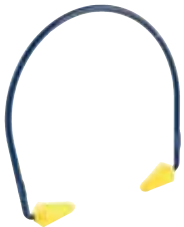


Reach around the back of your head and pull outward on the ear while inserting the plug until you feel it sealing. This may seem tight at first, especially if you have never worn earplugs.

Pre-moulded earplugs could last several months depending on the type and on your work environment, hygiene and body chemistry. They should be replaced if they shrink, harden, tear, crack or become permanently deformed. Wash them in warm soapy water and rinse well. When dry, store them in a carrying case.

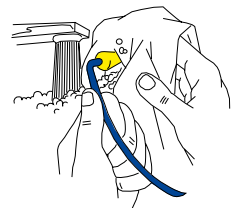


Banded Earplugs



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.

Most semi-aural hearing protectors can be cleaned in the same way as pre-moulded earplugs. Since the band holds the tips in place to provide an acoustic seal, do not tamper with it otherwise the protection afforded by the device may be reduced.

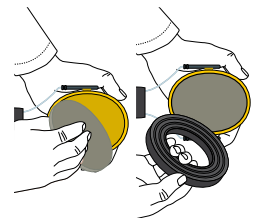


Earmuffs



Earmuffs 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.

Cushions can be cleaned with warm soapy water and rinsed thoroughly. Do not use alcohol or solvents. Cushions normally need replacing at least twice a year or more – whenever they become stiff, cracked, or do not seal. Do not modify earmuffs in any way, and especially do not stretch or abuse the headband as this will reduce protection.



Peltor™ Clean

Disposable hygiene protection for hearing protectors, headsets e.t.c.

Product code

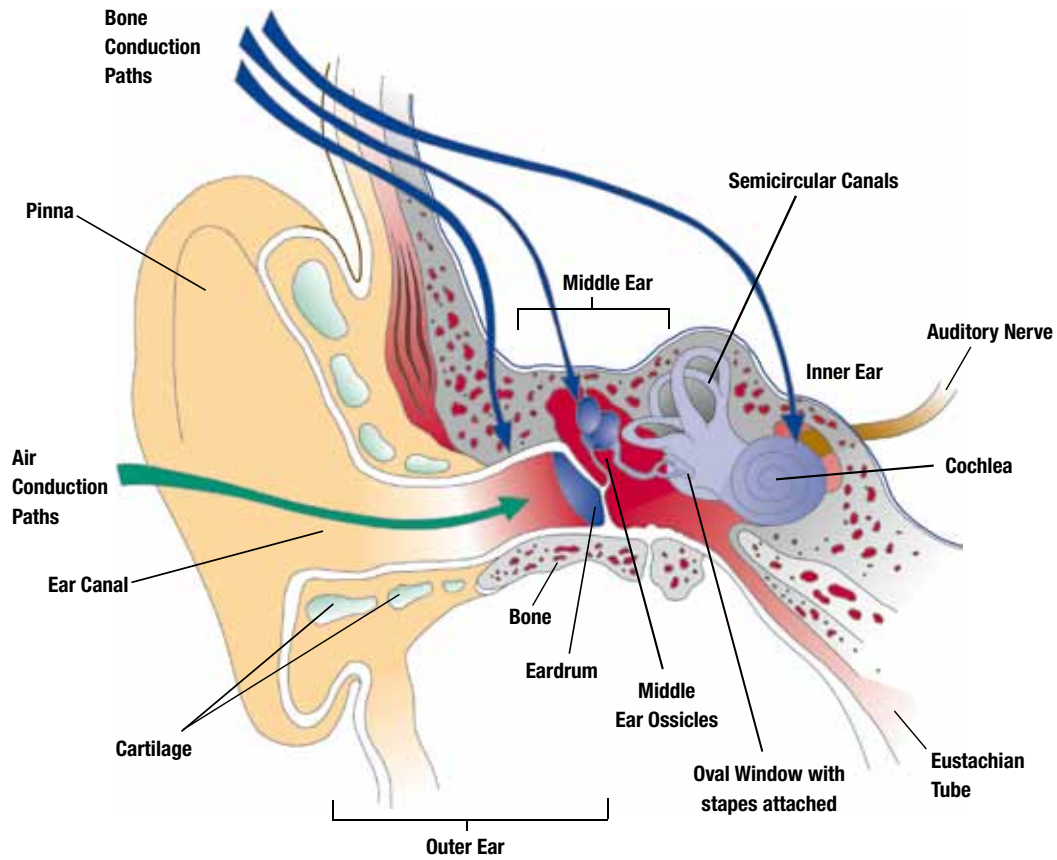
HY100A 100 pairs on a roll in a dispenser

HY100A-01 20 envelopes x 5 pairs in a dispenser.

The disposable hygiene protection Peltor™ Clean is an easy way to improve hygiene and comfort. They are easy to fix to the sealing rings and lead to insignificant loss of attenuation. Effective and practical for use in dirty or hot environments to keep cushions hygienically clean. Also useful when several persons are using the same item, for example visitors hearing protectors.



Cross Section Of Ear



Injuries Are Lifelong

The human ear is designed to pick up natural sounds. Many workplace processes and applications can generate noise levels that are potentially harmful to hearing. When the tiny sensory hair cells are repeatedly exposed to excessive doses of noise, they break. The surviving sensory hair cells can only process a fraction of the usual information transfer, thus leading to permanent hearing damage.

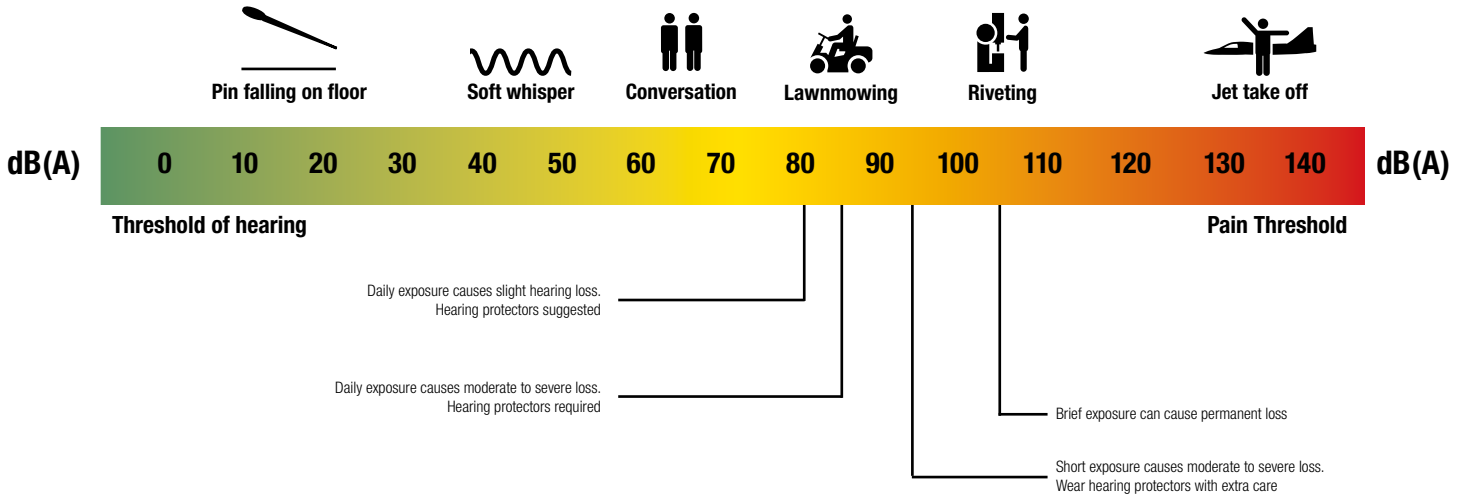


Normal ear showing an electron micrograph of tiny sensory hair cells that are responsible for processing sound vibration into meaningful information.



Damaged ear showing an electron micrograph of tiny sensory hair cells broken as a result of repeated exposure to loud noise resulting in permanent hearing loss.

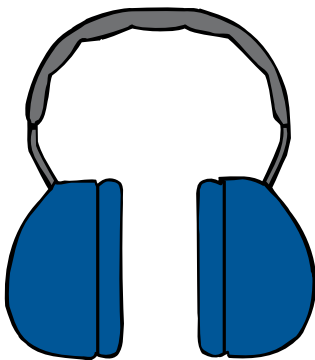
Easy To Damage - Easy To Protect



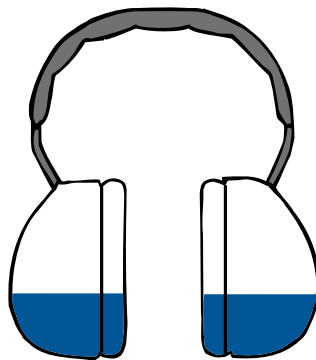
100% Usage

Damage to hearing depends not only on the actual noise level but also exposure time.

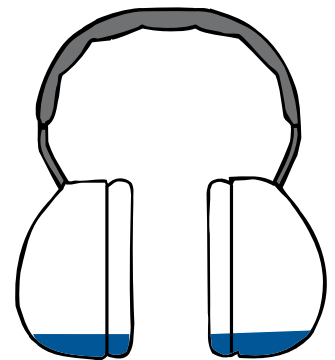
That's why 100% usage is critical in noisy environments if you are to get the protection that the chosen hearing protector provides. Choose a comfortable hearing protector that suits you and your needs.



100% usage.
Gives the expected protection.



99% usage.
Just five minute's carelessness per day significantly reduces the effect of the hearing protector.



90% usage.
Virtually no protection.

100% usage - the only secure protection from hearing loss

3M™ Technical Information

Noise Regulations

The Control of Noise at Work Regulations 2005 is designed to ensure that employees are protected from physical as opposed to chemical hazards. Hearing loss is one of the most common industrial injuries, and, despite some success in reducing it due to earlier legislation, continues to cost industry dearly whilst making retirement a misery for many. Noise induced hearing loss is totally preventable using a variety of techniques including process evaluation, engineering control, hearing protectors etc.

Action and Limit Values

All values for noise exposure are averaged over an 8 hour working day except for peak values (impact or impulse noise) which refer to a single event. There is an option to average the noise level over a 40 hour week. An action Value is a point at which certain defined actions must take place.

The Limit Value is the noise level at the ear which must not be exceeded.

Lower Action Value 80 dB(A) continuous or 112 pa (135 dB(C)) Peak level

- Assess the level of the risk
- Take reasonable steps to reduce exposure
- Advise employees of the risk
- Provide appropriate hearing protection
- Provide training and information about the risk and control measures
- Provide Audiometry when risk assessment suggests a risk to health

Upper Action Value 85 dB(A) continuous or 140 pa (137 dB(C)) Peak level

- All the above
- Wearing of hearing protection is compulsory
- Audiometry is a requirement

Exposure Limit Value 87 dB(A) continuous or 200 pa (140 dB(C)) Peak level

- This limit must never be exceeded
- The level is at the ear, i.e. takes into account any hearing protection used

Hearing Protection Standards

EN 13819-1	Physical Testing
EN 13819-2	Acoustic Testing
EN 352-1	Earmuffs
EN 352-2	Earplugs
EN 352-3	Helmet Mount Earmuffs
EN 352-4	Level Dependent Earmuffs
EN 352-5	Active Noise Reduction Earmuffs
EN 352-6	Earmuffs with Electrical Audio Input
EN 352-7	Level Dependent Earplugs
EN 458	Selection, Care, Use, Maintenance
EN 352-8	Entertainment Audio Ear Muffs



Educational Aids

Providing your workers with hearing protection is not enough to ensure you comply with health & safety regulations. Involving workers in the choice of hearing protection and providing them with a good quality training program plays a vital part.

3M has a wide variety of educational material to help you achieve an effective training scheme: from posters, leaflets, videos and presentations through to model ears to demonstrate how to fit an earplug. Our sales expertise can provide you with the tools you need to construct and provide an effective training programme.

Peltor™ Helmet Options

Helmet Manufacturer	Helmet Model	P3*	H31	H510	H520	H540	Helmet Manufacturer	Helmet Model	P3*	H31	H510	H520	H540
Auboueix	Brennus	F	SML	SML	SML	SML	Protector	Tuffmaster II	E,G	ML	ML	ML	ML
Auboueix	Fondelec	F	SML	SML	SML	SML	Römer	Bravo 2 Nomaz	B	SML	SML	SML	SML
Auboueix	Iris	E	-	ML	ML	ML	Römer	Marcus Top 2/Atlas Nomaz	B	SML	SML	SML	SML
Auboueix	Iris 2	E	ML	ML	ML	ML	Römer	N2 Atlas Nomaz	BB	SML	SML	SML	SML
Berendsen	Balance HD	N	SML	SML	SML	SML	Römer	Profi Expo	E	SML	SML	SML	SML
Centurion	1125/ARCO plus	H	SML	SML	SML	SML	Römer	Profi Nomaz	E	SML	SML	SML	SML
Centurion	1100/ARCO type 2	H	SML	SML	SML	ML	Römer	Top Expo Atlas	B	SML	SML	SML	SML
Centurion	1540/ARCO	A	ML	ML	ML	ML	Schuberth	BEN	BB	SML	SML	SML	SML
Evert Larsson	Robust	E	SML	SML	SML	ML	Schuberth	BER80/WPC80	EA	SML	SML	SML	SML
Evert Larsson	Balance	E	ML	ML	ML	ML	Schuberth	BER S	E	SML	SML	SML	SML
Evert Larsson	Balance AC/3M 1465	E	ML	ML	ML	ML	Schuberth	BOP R	B	SML	SML	SML	SML
Kemira	Top Cap	A	SML	SML	SML	SML	Schuberth	PIONIER	B	SML	SML	SML	SML
LAS	LP2002	E	SML	SML	SML	SML	Schuberth	SH91/WPL91	EB	SML	SML	SML	SML
LAS	LP2006	E	SML	SML	SML	SML	Schuberth	SW1	EB	SML	SML	SML	SML
MSA	Super V-Gard II	E	SML	SML	SML	SML	Sofop Teliaplast	Oceanic	E	ML	ML	ML	ML
MSA	V-Gard	E	SML	SML	SML	SML	Sofop Teliaplast	Opus	E	ML	ML	ML	ML
Peltor™	G2000	K,E	SML	SML	SML	SML	UVEX	Airwing	E	SML	SML	SML	SML
Peltor™	G22	E	SML	SML	SML	SML	Voss	Inap 88	E	SML	SML	SML	SML
Peltor™	G3000	E	SML	SML	SML	SML	Voss	Inap Master	E	ML	ML	ML	
Petzel	Vertex	E	SML	SML	SML	SML	Voss	Inap Star	E	ML	ML	ML	SML
Protector	Elite 300	E	SML	SML	SML	ML	Voss	Inap PCG	G	-	ML	ML	ML
Protector	Style 600	G	SML	SML	SML	SML							

The fitting of helmets with Peltor™ cups.

S = Small size

M = Medium size

L = Large size



3M™ Attenuation Data

EAR E-A-RTM ULTRAFIT™ 14 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	3.9	2.9	4.3	8.3	18.3	26.9	31.4	29.9
Standard Deviation (dB)	3.0	1.9	1.7	3.0	2.2	2.2	3.4	3.9
Assumed Protection (dB)	0.9	1.0	2.6	5.3	16.1	24.7	28.0	26.0

SNR=14dB H=22dB, M=10dB, L=5dB

EAR E-A-RTM E-A-RFLEX™ 14 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	3.9	2.9	4.3	8.3	18.3	26.9	31.4	29.9
Standard Deviation (dB)	3.0	1.9	1.7	3.0	2.2	2.2	3.4	3.9
Assumed Protection (dB)	0.9	1.0	2.6	5.3	16.1	24.7	28.0	26.0

SNR=14dB H=22dB, M=10dB, L=5dB

EAR E-A-RTM E-A-RSOFT™ 21 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	19.1	18.1	16.1	17.1	19.8	31.9	34.9	31.0
Standard Deviation (dB)	5.9	5.4	4.9	4.0	2.8	4.7	4.3	5.2
Assumed Protection (dB)	13.2	12.7	11.2	13.1	17.0	27.2	30.6	25.8

SNR=21dB H=24dB, M=17dB, L=14dB

EAR E-A-RTM ULTRAFIT™ 20 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	7.2	9.0	11.9	17.6	23.9	28.9	32.1	35.8
Standard Deviation (dB)	5.1	4.5	3.9	3.6	3.1	3.6	7.1	4.2
Assumed Protection (dB)	2.1	4.5	8.0	14.0	20.8	25.3	25.0	31.6

SNR=20dB H=25dB, M=17dB, L=10dB

EAR E-A-RTM CLEARE-A-RT™ 20 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	7.2	9.0	11.9	17.6	23.9	28.9	32.1	35.8
Standard Deviation (dB)	5.1	4.5	3.9	3.6	3.1	3.6	7.1	4.2
Assumed Protection (dB)	2.1	4.5	8.0	14.0	20.8	25.3	25.0	31.6

SNR=20dB H=25dB, M=17dB, L=10dB

EAR E-A-RTM TRACER™ 20

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	7.2	9.0	11.9	17.6	23.9	28.9	32.1	35.8
Standard Deviation (dB)	5.1	4.5	3.9	3.6	3.1	3.6	7.1	4.2
Assumed Protection (dB)	2.1	4.5	8.0	14.0	20.8	25.3	25.0	31.6

SNR=20dB H=25dB, M=17dB, L=10dB

EAR E-A-RTM ULTRATECH™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.3	15.3	18.1	20.8	21.8	26.3	21.5	27.0
Standard Deviation (dB)	3.3	2.9	3.6	4.3	3.5	3.0	3.2	4.7
Assumed Protection (dB)	11.0	12.3	14.5	16.4	18.3	23.3	18.3	22.3

SNR=21dB H=18dB, M=18dB, L=16dB

EAR E-A-RTM E-A-RFLEX™ 20 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	7.2	9.0	11.9	17.6	23.9	28.9	32.1	35.8
Standard Deviation (dB)	5.1	4.5	3.9	3.6	3.1	3.6	7.1	4.2
Assumed Protection (dB)	2.1	4.5	8.0	14.0	20.8	25.3	25.0	31.6

SNR=20dB H=25dB, M=17dB, L=10dB

EAR E-A-RTM E-A-RBAND™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20.5	19.4	16.0	16.5	20.9	31.4	35.3	36.0
Standard Deviation (dB)	4.2	5.4	4.1	4.2	2.5	4.3	3.6	4.0
Assumed Protection (dB)	16.3	14.0	11.9	12.3	18.4	27.1	31.7	32.0

SNR=21dB H=25dB, M=17dB, L=14dB

EAR E-A-RTM CABOFLEX™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	22.7	20.7	22.4	22.7	23.8	32.3	42.2	36.2
Standard Deviation (dB)	8.7	7.8	8.7	9.2	7.0	5.7	4.6	8.2
Assumed Protection (dB)	13.9	12.9	13.7	13.5	16.8	26.6	37.6	28.0

SNR=21dB H=25dB, M=17dB, L=15dB

EAR E-A-RTM CLASSIC™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	22.3	23.3	24.6	26.9	27.4	34.1	41.6	40.4
Standard Deviation (dB)	5.4	5.3	3.6	5.4	4.8	3.1	3.5	6.4
Assumed Protection (dB)	16.9	18.1	20.9	21.5	22.6	30.9	38.1	34.0

SNR=28dB H=30dB, M=24dB, L=22dB

EAR E-A-RTM EXPRESS™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	27.8	26.0	24.9	25.2	29.4	34.9	37.0	35.9
Standard Deviation (dB)	5.4	4.5	3.3	5.0	4.2	4.1	5.2	3.7
Assumed Protection (dB)	22.4	21.5	21.5	20.2	25.2	30.8	31.8	32.2

SNR=28dB H=30dB, M=24dB, L=22dB

EAR E-A-RTM SWERVE™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	21.9	19.7	17.7	17.6	21.8	32.8	38.9	33.4
Standard Deviation (dB)	4.9	3.7	2.8	2.8	1.8	3.8	3.0	4.9
Assumed Protection (dB)	17.0	16.0	14.9	14.8	20.0	29.0	35.9	28.5

SNR=23dB H=27dB, M=19dB, L=17dB

EAR E-A-RTM E-A-RCAP™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	21.0	20.2	19.8	19.1	23.2	33.4	41.0	40.7
Standard Deviation (dB)	4.1	4.4	4.2	4.3	3.7	4.5	2.9	5.4
Assumed Protection (dB)	16.9	15.8	15.5	14.8	19.5	29.0	38.1	35.2

SNR=23dB H=27dB, M=19dB, L=17dB

EAR E-A-RTM REFLEX™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	23.3	24.4	22.7	24.1	27.7	35.3	39.8	37.9
Standard Deviation (dB)	8.7	8.1	7.0	5.6	4.8	5.1	4.8	7.3
Assumed Protection (dB)	14.6	16.3	15.7	18.5	22.9	30.2	35.0	30.6

SNR=26dB H=29dB, M=22dB, L=18dB

EAR E-A-RTM FLEXICAP™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	26.1	22.8	20.1	18.3	22.0	32.7	36.5	37.0
Standard Deviation (dB)	5.2	6.0	5.0	3.3	3.4	4.1	4.3	8.3
Assumed Protection (dB)	20.8	16.8	15.1	15.3	18.6	28.6	32.2	28.7

SNR=23dB H=26dB, M=19dB, L=17dB

PELTON PELTORM OPTIME™ I - H510A EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	11.6	18.7	27.5	32.9	33.6	36.1	35.8
Standard Deviation (dB)	4.3	3.6	2.5	2.7	3.4	3.0	3.8
Assumed Protection (dB)	7.3	15.1	25.0	30.1	30.2	33.2	32.0

SNR=27dB H=32dB, M=25dB, L=15dB

PELTON PELTORM OPTIME™ I - H510B EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	10.9	17.1	25.4	31.5	32.6	36.3	34.8
Standard Deviation (dB)	3.5	2.8	1.8	2.6	4.3	3.4	3.6
Assumed Protection (dB)	7.3	14.3	23.6	28.9	28.3	32.9	31.1

SNR=26dB H=30dB, M=24dB, L=15dB

PELTON PELTORM OPTIME™ I - H510F EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	12.2	18.7	27.1	32.9	35.0	36.5	34.4
Standard Deviation (dB)	3.4	3.2	3.0	2.1	4.0	2.9	3.9
Assumed Protection (dB)	8.7	15.5	24.1	30.8	31.0	33.6	30.6

SNR=28dB H=32dB, M=25dB, L=16dB

PELTON PELTORM OPTIME™ I - P3* EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	11.2	13.4	26.9	33.9	32.0	33.5	36.9
Standard Deviation (dB)	2.0	1.9	1.8	1.9	2.4	1.8	1.8
Assumed Protection (dB)	9.2	11.5	25.1	31.9	29.6	31.7	35.1

SNR=26dB H=32dB, M=23dB, L=15dB

**PELTOR™ BULLS EYE™ I EARMUFFS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	13.2	10.9	17.3	26.6	28.3	33.5	37.8	37.9
Standard Deviation (dB)	3.2	3.2	2.5	2.2	2.7	2.6	2.0	2.6
Assumed Protection (dB)	10.0	7.7	14.8	24.4	25.6	30.9	35.7	35.3

SNR=27dB H=32dB, M=24dB, L=15dB

**PELTOR™ H31A 300 EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	11.2	17.4	29.7	36.2	37.3	34.7	35.7
Standard Deviation (dB)	3.7	3.8	2.5	3.1	3.6	3.2	3.7
Assumed Protection (dB)	7.5	13.6	27.2	33.1	33.7	31.5	32

SNR=27dB H=33dB, M=25dB, L=15dB

**PELTOR™ H31B 300 EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	10.2	17.1	29	34.3	37.2	36.6	35.8
Standard Deviation (dB)	2.9	2.9	1.8	2.2	3.7	2.3	4.0
Assumed Protection (dB)	7.3	14.2	27.2	32.1	33.5	34.3	31.8

SNR=27dB H=34dB, M=25dB, L=15dB

**PELTOR™ H31P3* 300 EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	11.8	19.2	28.6	34.3	37.7	37.8	38.0
Standard Deviation (dB)	3.2	3.8	2.7	1.8	3.8	2.9	1.9
Assumed Protection (dB)	8.6	15.4	25.9	32.5	33.9	34.9	36.1

SNR=28dB H=35dB, M=26dB, L=16dB

**3M™ PULSAR™ EARPLUGS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	21.9	19.7	17.7	17.6	21.8	32.8	38.9	33.4
Standard Deviation (dB)	4.9	3.7	2.8	2.8	1.8	3.8	3.0	4.9
Assumed Protection (dB)	17.0	16.0	14.9	14.8	20.0	29.0	35.9	28.5

SNR=23dB H=27dB, M=19dB, L=17dB

**3M™ MODEL 5000™ EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	9.7	14.8	27.7	34.9	35.2	32.0	33.6
Standard Deviation (dB)	1.6	2.1	2.0	2.9	3.9	3.5	4.0
Assumed Protection (dB)	8.1	12.7	25.0	32.0	31.3	28.5	29.6

SNR=27dB H=31dB, M=25dB, L=17dB

**3M™ ULTRA™ 9000 EARMUFFS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	11.4	10.4	17.3	22.6	23.3	25.4	27.3	24.2
Standard Deviation (dB)	3.7	2.6	2.2	4.0	2.9	3.1	2.9	3.6
Assumed Protection (dB)	7.7	7.8	15.0	18.5	20.4	22.3	24.4	20.7

SNR=22dB H=22dB, M=20dB, L=15dB

**3M™ 1261/1271 EARPLUGS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	26.6	27.7	28.4	29.5	29.6	35.6	35.4	38.9
Standard Deviation (dB)	9.4	9.9	10.9	9.6	8.2	6.8	9.6	6.7
Assumed Protection (dB)	17.2	17.8	17.5	19.9	21.4	28.8	25.8	32.2

SNR=25dB H=27dB, M=22dB, L=20dB

**3M™ 1310 EARPLUGS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	22.6	21.7	21.8	23.6	25.1	34.8	40.5	42.7
Standard Deviation (dB)	5.0	4.6	4.5	4.3	3.0	3.2	4.3	3.6
Assumed Protection (dB)	17.6	17.0	17.3	19.3	22.1	31.6	36.2	39.1

SNR=26dB H=30dB, M=22dB, L=19dB

**E-A-R™ CLASSIC™ CORDED EARPLUGS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	21.7	23.7	26.1	30.4	30.1	33.8	42.6	42.1
Standard Deviation (dB)	6.3	5.6	5.2	5.7	5.3	4.6	4.0	5.7
Assumed Protection (dB)	15.4	18.0	20.9	24.6	24.9	29.2	38.6	36.4

SNR=29dB H=30dB, M=26dB, L=23dB

**E-A-R™ PRO-SEALS EARPLUGS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	27.8	28.2	26.9	29.2	31.8	33.0	39.1	44.4
Standard Deviation (dB)	7.3	7.2	5.9	6.7	5.4	4.5	7.7	4.9
Assumed Protection (dB)	20.5	21.0	21.0	22.5	26.4	28.5	31.4	39.5

SNR=29dB H=30dB, M=26dB, L=23dB

**E-A-R™ ULTRAFIT EARPLUGS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	29.2	29.4	29.4	32.2	32.3	36.1	44.3	44.8
Standard Deviation (dB)	6.0	7.4	6.6	5.3	5.0	3.2	6.0	6.4
Assumed Protection (dB)	23.2	22.0	22.7	26.9	27.3	32.8	38.3	38.4

SNR=32dB H=33dB, M=28dB, L=25dB

**E-A-R™ TRACERS EARPLUGS**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	29.2	29.4	29.4	32.2	32.3	36.1	44.3	44.8
Standard Deviation (dB)	6.0	7.4	6.6	5.3	5.0	3.2	6.0	6.4
Assumed Protection (dB)	23.2	22.0	22.7	26.9	27.3	32.8	38.3	38.4

SNR=32dB H=33dB, M=28dB, L=25dB

**PELTOR™ OPTIME™ II - H520A EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.6	20.2	32.5	39.3	36.4	34.4	40.2
Standard Deviation (dB)	1.6	2.5	2.3	2.1	2.4	4.0	2.3
Assumed Protection (dB)	13.0	17.7	30.2	37.2	34.0	30.4	37.9

SNR=31dB H=34dB, M=29dB, L=20dB

**PELTOR™ OPTIME™ II - H520B EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.7	20.4	32.3	39.6	36.2	35.4	40.2
Standard Deviation (dB)	1.8	2.6	2.5	2.2	2.4	4.2	2.4
Assumed Protection (dB)	12.9	17.8	29.8	37.4	33.8	31.2	37.8

SNR=31dB H=34dB, M=29dB, L=20dB

**PELTOR™ OPTIME™ II - H520F EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.5	20.3	32.6	39.1	35.1	34.7	39.8
Standard Deviation (dB)	1.8	2.6	2.4	2.5	2.3	2.7	2.5
Assumed Protection (dB)	12.7	17.7	30.2	36.6	32.8	32.0	37.3

SNR=31dB H=34dB, M=28dB, L=20dB

**PELTOR™ OPTIME™ II - H520P3* EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.1	19.4	32.0	39.9	36.2	35.4	39.2
Standard Deviation (dB)	2.3	2.7	2.7	2.4	2.6	4.4	2.6
Assumed Protection (dB)	11.8	16.7	29.3	37.5	33.6	31.0	36.6

SNR=30dB H=34dB, M=28dB, L=19dB

**PELTOR™ PUSH TO LISTEN HEADBAND EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.4	24.1	30.8	36.1	34.3	34.9	33.2
Standard Deviation (dB)	4.1	3.3	4.2	2.4	2.5	2.8	2.3
Assumed Protection (dB)	13.3	20.8	26.6	33.7	31.8	30.1	30.9

SNR=31dB H=32dB, M=29dB, L=21dB

**PELTOR™ PUSH TO LISTEN P3* HELMET ATTACHMENT EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.6	22.5	28.4	34.3	32.5	33.8	31.8
Standard Deviation (dB)	4.1	3.3	2.2	3.8	3.3	1.9	5.0
Assumed Protection (dB)	13.5	19.2	26.2	30.5	29.2	31.9	26.8

SNR=29dB H=30dB, M=27dB, L=21dB

**PELTOR™ BULLS'EYE II EARMUFFS**

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.5	20.3	32.6	39.1	35.1	34.7	39.8
Standard Deviation (dB)	1.8	2.6	2.4	2.5	2.3	2.7	2.5
Assumed Protection (dB)	12.7	17.7	30.2	36.6	32.8	32.0	37.3

SNR=31dB H=34dB, M=26dB, L=20dB

3M™ Attenuation Data

3M 3M™ TRI-FLANGETM EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	27.8	29.9	29.6	30.8	35.3	34.6	38.7	43.0
Standard Deviation (dB)	6.8	8.2	7.7	6.8	6.7	7.1	8.8	5.9
Assumed Protection (dB)	21.0	21.7	22.0	24.0	28.5	27.5	29.9	37.1

SNR=29dB H=29dB, M=27dB, L=24dB

3M 3M™ TORQUE™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	30.9	31.9	30.2	30.7	34.1	37.1	44.4	43.7
Standard Deviation (dB)	3.0	5.2	6.5	5.5	7.0	4.1	5.1	5.6
Assumed Protection (dB)	27.9	26.7	23.7	25.2	27.1	33.0	39.3	38.1

SNR=32dB H=33dB, M=28dB, L=26dB

EAR E-A-R™ E-A-RSOFT™ YELLOW NEONS EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	23.7	30.8	36.1	39.2	39.5	35.8	42.1	46.1
Standard Deviation (dB)	6.7	6.5	6.7	4.7	3.9	4.9	3.1	3.3
Assumed Protection (dB)	17.0	24.3	29.4	34.5	35.6	30.9	39.0	42.8

SNR=36dB H=34dB, M=34dB, L=31dB

EAR E-A-R™ E-A-RSOFT™ BLASTS EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	23.7	30.8	36.1	39.2	39.5	35.8	42.1	46.1
Standard Deviation (dB)	6.7	6.5	6.7	4.7	3.9	4.9	3.1	3.3
Assumed Protection (dB)	17.0	24.3	29.4	34.5	35.6	30.9	39.0	42.8

SNR=36dB H=34dB, M=34dB, L=31dB

EAR E-A-R™ E-A-RSOFT™ METAL DETECTABLE EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	23.7	30.8	36.1	39.2	39.5	35.8	42.1	46.1
Standard Deviation (dB)	6.7	6.5	6.7	4.7	3.9	4.9	3.1	3.3
Assumed Protection (dB)	17.0	24.3	29.4	34.5	35.6	30.9	39.0	42.8

SNR=36dB H=34dB, M=34dB, L=31dB

EAR E-A-R™ CLASSIC™ SOFT EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	28.2	30.6	32.8	35.9	36.0	38.5	43.8	43.1
Standard Deviation (dB)	6.7	6.4	5.4	4.2	3.7	3.2	3.8	3.8
Assumed Protection (dB)	21.5	24.2	27.4	31.7	32.3	35.3	40.0	39.3

SNR=36dB H=36dB, M=33dB, L=29dB

EAR E-A-R™ SUPERFIT™ 33 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	24.9	27.5	31.2	33.9	34.5	37.5	43.3	45.0
Standard Deviation (dB)	7.2	6.9	6.9	7.0	6.0	3.3	3.3	4.8
Assumed Protection (dB)	17.7	20.6	24.3	27.0	28.5	34.2	40.1	40.2

SNR=33dB H=35dB, M=29dB, L=26dB

EAR E-A-R™ SUPERFIT™ 36 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	29.1	32.4	36.0	38.0	38.9	39.1	43.1	44.6
Standard Deviation (dB)	6.2	7.3	7.3	6.8	6.7	3.1	6.1	6.3
Assumed Protection (dB)	22.8	25.0	28.7	31.2	32.2	35.9	37.0	38.4

SNR=36dB H=36dB, M=33dB, L=30dB

EAR E-A-R™ E-A-RSOFT™ FX EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	34.6	37.5	38.5	40.4	38.6	39.6	48.9	47.8
Standard Deviation (dB)	5.7	6.0	5.4	5.0	4.2	2.5	3.8	3.9
Assumed Protection (dB)	28.9	31.5	33.1	35.4	34.4	37.1	45.1	43.9

SNR=39dB H=39dB, M=36dB, L=34dB

EAR E-A-R™ PUSH-INST™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	34.8	37.0	38.2	40.2	39.9	40.1	41.9	41.1
Standard Deviation (dB)	5.0	5.7	6.0	4.5	5.0	3.3	3.8	3.7
Assumed Protection (dB)	29.8	31.3	32.2	35.7	34.9	36.8	38.1	37.4

SNR=38dB H=37dB, M=36dB, L=34dB

EAR E-A-R™ ULTRAFIT™ X EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	33.1	34.6	34.2	35.8	38.2	38.0	42.9	45.2
Standard Deviation (dB)	4.7	5.6	6.7	5.7	5.7	5.3	4.5	6.0
Assumed Protection (dB)	28.4	29.0	27.5	30.1	32.5	32.7	38.4	39.2

SNR=35dB H=35dB, M=32dB, L=30dB

PELTON PELTOR™ OPTIME™ III H540A EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.4	24.7	34.7	41.4	39.3	47.5	42.6
Standard Deviation (dB)	2.1	2.6	2.0	2.1	1.5	4.5	2.6
Assumed Protection (dB)	15.3	22.1	32.7	39.3	37.8	43.0	40.0

SNR=35dB H=40dB, M=32dB, L=23dB

PELTON PELTOR™ OPTIME™ III H540B EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.5	24.5	34.5	41.4	39.5	47.3	42.0
Standard Deviation (dB)	2.3	2.7	2.0	2.2	2.0	4.4	2.8
Assumed Protection (dB)	15.2	21.8	32.5	39.2	37.5	42.9	39.2

SNR=35dB H=40dB, M=32dB, L=23dB

PELTON PELTOR™ OPTIME™ III H540P3* EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.1	24.5	34.8	40.2	39.6	46.7	43.1
Standard Deviation (dB)	2.3	2.8	2.2	2.0	1.8	4.2	2.5
Assumed Protection (dB)	14.8	21.7	32.6	38.2	37.8	42.5	40.6

SNR=34dB H=40dB, M=32dB, L=22dB

PELTON PELTOR™ BULLS EYE™ III EARMUFFS

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.4	24.7	34.7	41.4	39.3	47.5	42.6
Standard Deviation (dB)	2.1	2.6	2.0	2.1	1.5	4.5	2.6
Assumed Protection (dB)	15.3	22.1	32.7	39.3	37.8	43.0	40.0

SNR=35dB H=40dB, M=32dB, L=23dB

3M 3M™ SOLAR™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	23.7	30.8	36.1	39.2	39.5	35.8	42.1	46.1
Standard Deviation (dB)	6.7	6.5	6.7	4.7	3.9	4.9	3.1	3.3
Assumed Protection (dB)	17.0	24.3	29.4	34.5	35.6	30.9	39.0	42.8

SNR=36dB H=34dB, M=34dB, L=31dB

3M 3M™ NO-TOUCH™ EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	30.4	32.3	31.3	33.5	36.1	37.4	47.8	46.5
Standard Deviation (dB)	4.1	4.9	4.1	3.8	3.5	4.3	4.3	5.5
Assumed Protection (dB)	26.3	27.4	27.2	29.7	32.6	33.1	43.5	41.0

SNR=35dB H=35dB, M=32dB, L=30dB

3M 3M™ 1120/1130 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	22.9	27.3	30.8	33.5	36.5	39.0	46.9	45.3
Standard Deviation (dB)	4.1	5.4	5.6	5.9	4.0	3.7	4.7	4.6
Assumed Protection (dB)	18.8	21.9	25.2	27.6	32.5	35.3	42.2	40.7

SNR=34dB H=37dB, M=31dB, L=27dB

3M 3M™ 1100/1110 EARPLUGS

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	30.0	33.1	36.3	38.4	38.7	39.7	48.3	44.4
Standard Deviation (dB)	3.9	5.0	7.4	6.2	5.6	4.3	4.5	4.4
Assumed Protection (dB)	26.1	28.1	28.9	32.2	33.1	35.4	43.8	40.0

SNR=37dB H=37dB, M=34dB, L=31dB



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