



3M Science.
Applied to Life.™

Personal Safety Division

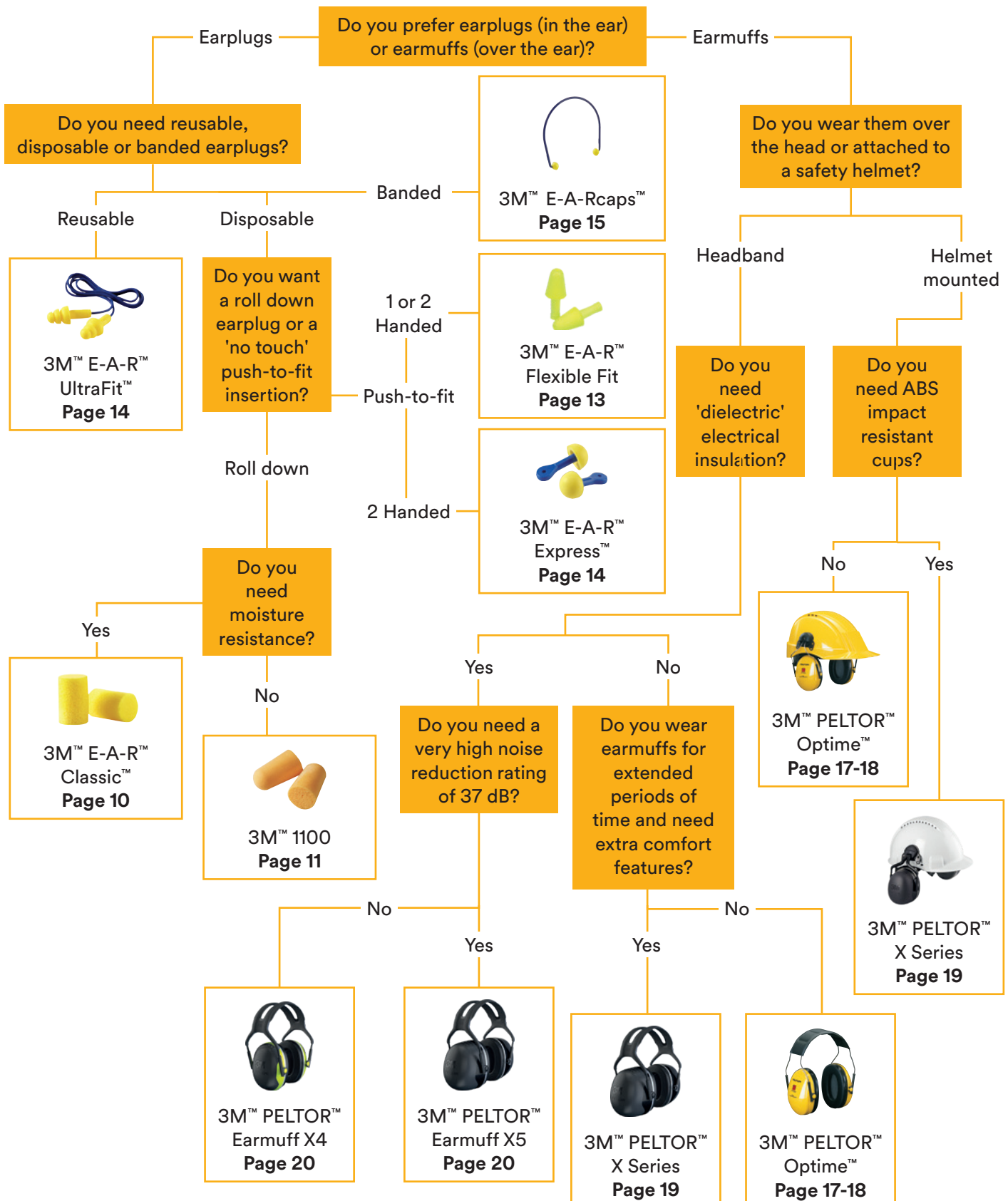
Hearing Solutions Catalogue




































3M™ Passive Hearing Protectors

Passive hearing protectors help reduce the noise by mechanically blocking the sound waves and are ideal for situations with continuous noise levels. 3M offers both passive earplugs and earmuffs. Earplugs provide a great combination of comfort and hearing protection for users. They come in a variety of types and styles: disposable foam, push-to-fit, reusable and banded earplugs. Earmuffs are available in headband, neckband, and hard hat attached models.

Choosing the right passive hearing solution



														
Hearing protection types:														
Disposable earplugs	●	●	●	●	●									
Push-to-fit earplugs						●	●							
Re-usable earplugs								●						
Banded earplugs									●					
Ear muffs										●	●	●	●	●
SNR v dB		36	28	28	37	28	30/35	32	23	27	31	35	33	37
Noise level:														
< 85 dB														
83–93 dB														
87–98 dB			●	●		●			●	●				
94–105 dB							●	●			●			
95–110 dB		●			●		●					●	●	●
Customer need:														
Corded	●		●	●		●	●	●						
Un-corded	●	●		●		●	●	●						
Application/environment:														
Temperature (*cold/hot*)														
Humidity		●	●				●			●	●	●	●	●
Lack of hygiene facility						●	●	●		●	●	●	●	●

The challenges of hearing protection

40 million workers are exposed to loud noise and 13 million suffer from hearing disorders despite industry regulations*. You can advance your hearing conservation programme with a customised and comprehensive approach to the hearing protection challenge. Implementing a solution that really makes a difference begins with understanding the hazards, the regulation and the factors that impact protection.

The facts

The #1 Reported Occupational Health Issue: data from the European Agency for Safety and Health at Work shows that noise induced hearing loss is the most commonly reported occupational medical condition in the EU.

One Third of European Employees Potentially at Risk: according to the EU OSHA one third of workers in Europe are exposed to potentially dangerous levels of noise.

Repeated exposure to loud sounds, greater than 85 dB(A), can cause permanent hearing loss and tinnitus. Other health effects related to noise include stress, anxiety, hypertension, sleep disturbance and fatigue.

The regulations

The Physical Agents (Noise) Directive 2003/10/EC states that suitable hearing protection devices be made available at the Lower Exposure Action Value and information on the harmful effects of noise provided to the worker.

At Upper Exposure Action Value suitable hearing protectors must be worn in areas where there is risk of noise induced hearing damage and entry to such areas should be strictly controlled. In addition, hearing conservation programme be initiated which may include general health surveillance and audiometric checks. The Limit Value is the absolute ceiling limit that must not be exceed at any time and can be achieved by using appropriate hearing protectors.

LEX, 8h
87dB (A)
140dB (C) Peak

LEX, 8h
85dB (A)
137dB (C) Peak

LEX, 8h
80dB (A)
135dB (C) Peak

Limit Value

Cannot be exceeded at any time. Can be achieved with HPE.

Upper Exposure Action Value

HPE must be used and a Hearing Conservation Programme initiated.

Lower Exposure Action Value

HPE must be made available on request.

* Source: European Agency for Safety and Health at Work

The real world concerns of hearing protection

Variable Noise Levels: Every environment is different and workers can face a wide range of sound levels throughout the day and in different areas at the same facility.

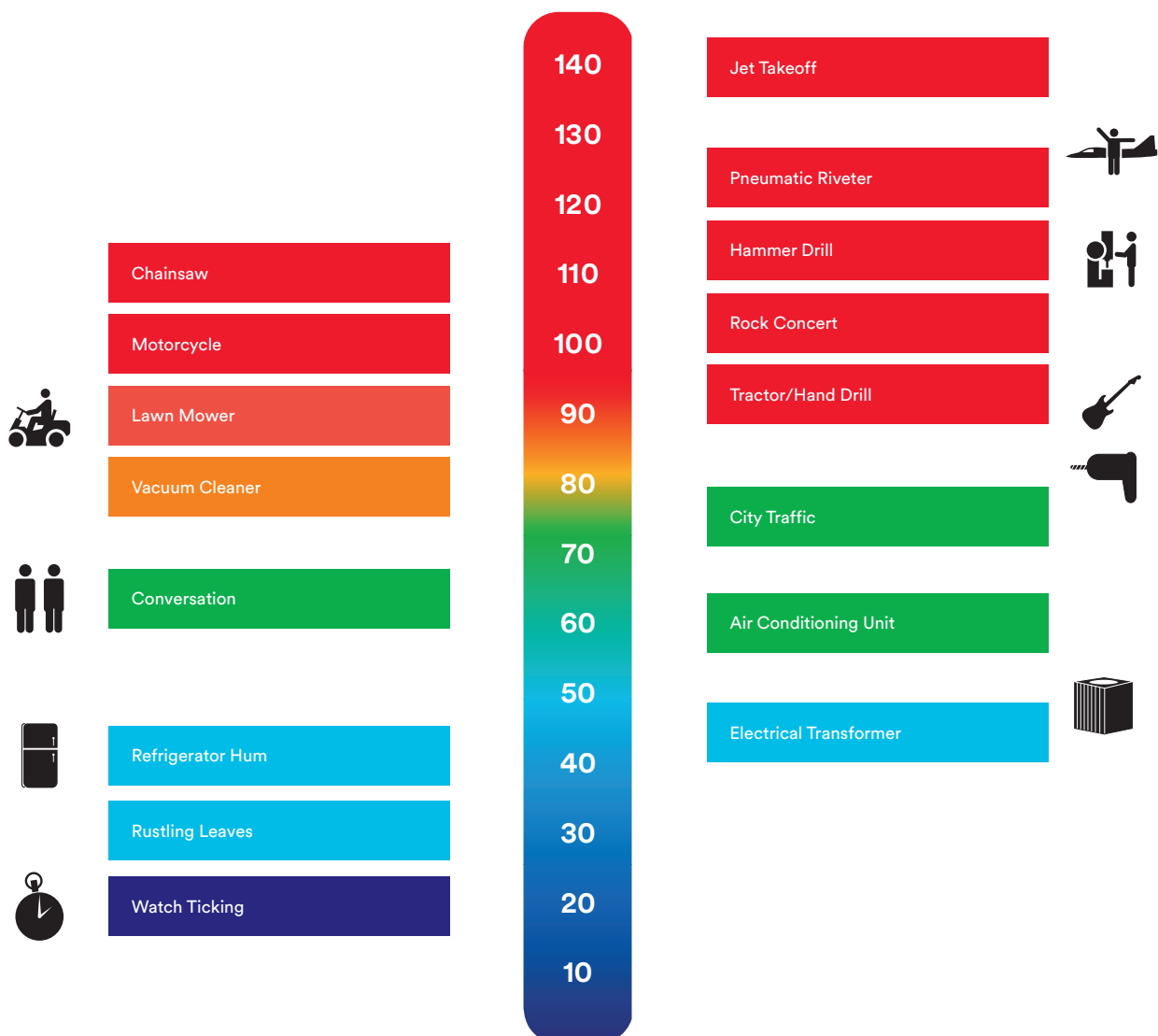
The Human Factor: Each person has a different shape, size and anatomy of the ear canal, so there is no one-size fits all hearing protection solution. The key to achieving optimal protection is having the best fit possible.

Employee Communication: Where there is an essential need for workers to communicate or hear warning sounds it is vital that their hearing is protected from hazardous noise levels.

What types of sounds require hearing protection?

At home and work, it's important to understand which sounds may cause hearing loss and require hearing protection:

Decibel scale dB(A)



Is your hearing protection fit for purpose?

Harmful noise is one of the top 3 health hazards in the workplace. Noise is now officially recognised as an irreversible health hazard in accordance with the PPE Regulation (EU) 2016/425 and placed in the highest risk category as respiratory protection and fall protection, for example.

Implication of the change in categorisation.

Your supplier of hearing protection products

Manufacturers of hearing protection products are subject to more stringent on-going quality control procedures, including quality control of products or quality assurance for the entire manufacturing site.

Your users of hearing protection products

Protection from harmful noise needs to be taken seriously, and using the right product and wearing it correctly is vital. The PPE Regulation recognises this and brings added confidence to users that the products they are wearing are stringently monitored for on-going compliance.

As a Safety Officer what should you be aware of?

- ▶ Ensure the hearing protection is fully compliant with appropriate standards and PPE Regulation
- ▶ Training of workers in the correct selection of personal protective equipment is even more important since the change in categorisation of hearing protectors.



3M has over 50 years' experience of developing innovative hearing protection products

At 3M we recognise the importance of providing the appropriate level of support for our customers. Whether it's helping you choose the right products for particular hazards and working environments, or helping you keep up to date with changing legislation and the implications for your workplace.

3M is here to help



3M has a team of dedicated hearing technical and regulatory experts around Europe.

At 3M our manufacturing processes operate to stringent quality monitoring principles required by the PPE Regulation, and our team of experts actively participate on many European CEN Standards Committees as well as trade associations such as the European Safety Federation.

3M can help you fulfil your essential training requirement

As with any personal protective equipment used in high risk environments, you need to be fully confident that you select the appropriate hearing protector suitable for your workplace needs. 3M can help. We offer a range of training services including:

- ▶ Presentations
- ▶ Seminars
- ▶ Face to face demonstrations
- ▶ User training videos
- ▶ Webinars
- ▶ Fit testing

It starts with PAR

How do you decide what hearing protection you will offer to your workers?

If you are simply using the SNR found on the hearing protection packaging as a guide you may not be providing accurate protection levels for every worker. Ears come in many shapes and sizes and to make sure all workers are getting the protection they need, you need to know their Personal Attenuation Rating (PAR).

Noise-induced hearing loss is 100% preventable.

✓ 29dB pass.

A “pass” result means the hearing protection is inserted properly and provides sufficient protection for the worker’s specific job.

✗ 10dB fail.

A “fail” result means the hearing protection is either not inserted properly or is the wrong type or size for the worker’s ear canal.



What’s your PAR?

Every employee is different.
Every job is different.
Every ear is different.

Finding each employee’s PAR will help you have assurance that workers’ hearing is protected and they are compliant with the law. That’s why we made the new 3M™ E-A-Rfit Dual-Ear Validation System fast, accurate and easy.

Fit testing is key

Get results you can trust. The 3M™ E-A-Rfit™ Dual-Ear Validation System measures the effectiveness of the earplug or earmuff inside the employee’s ear providing accurate, quantitative results. Because you can simultaneously test both ears, you have more to focus on education including the importance of fit and protection.

Why 3M?

As the leader in hearing protection, 3M offers a complete solution, with dual-ear and earmuff testing capabilities plus a user-friendly interface. The 3M™ E-A-Rfit™ Dual-Ear Validation System is the fast and easy way to find your employees’ PAR, because we know how important it is to make your hearing conservation program fit seamlessly into your operation.

Technology and support from the hearing protection experts

Employee education and training

The 3M global hearing experts provide valuable on-site training and seminars throughout the world, helping employers and their workers achieve their hearing conservation goals. This training is conveniently performed on-site at no cost. Whether it's explaining attenuation ratings or regulations, or providing the motivation workers need to comply, 3M Hearing Specialists are available to help you achieve your hearing conservation program objectives. They're experts in hearing conservation training and will work with your team to help ensure your professional workers are protected with the right hearing protection equipment for their jobs.

Understanding Single Number Rating (SNR)

A single number rating is the overall level of attenuation of the hearing protector across all test frequencies performed in a laboratory under ideal conditions. However, each hearing protector's SNR may not be a good estimate for workplace noise reduction.

Many factors, such as the relationship between the size of the wearer's head and size of the wearer's ear canal, and how it fits over the ears or inserted in the ear canal, can impact how effective that hearing protector will be. That's why it is so important to have the 3M™ E-A-Rfit™ Validation System as part of your hearing conservation program and the support of a hearing protection team with over 40 years of expertise.

Innovation from the experts

At 3M, we understand the challenges of the workplace, the complexities of fitting protection devices, and the importance of creating adaptable solutions for maximising hearing protection. Our innovations in noise detection, protection and validation are designed to solve real-world challenges, providing our customers with the advanced and comprehensive solutions needed to help protect workers.

The 3M team of application specialists, sound engineers, and support personnel provides an unmatched level of support you can rely on to advance your hearing protection program.



3M™ Disposable Foam Earplugs

3M™ Disposable Earplugs, made from expandable slow-recovery foam, provide a great combination of comfort and hearing protection for users. Once in the ear, foam earplugs expand to conform to the unique shape of each ear, providing a comfortable, custom fit. 3M provides a wide range of disposable roll-down earplugs so you can choose the best solution for your individual needs.

3M™ E-A-R™ Classic™ Earplugs

3M™ E-A-R™ Classic™ Earplugs were the industry’s first foam earplugs, virtually revolutionising hearing protection. Today, the revolution continues. It meets more wearer and environmental needs with its proprietary foams, preferred cylindrical shape and proven in-ear comfort.

Available with cord	✓
Moisture resistant	✓
Reusable	
Slow recovery foam	✓
No roll down required	



Dispenser available, uncorded models

Product number	Product description	Attenuation rating (SNR)	Corded	Case qty
PP-01-002	3M™ E-A-R™ Classic™ Earplugs, Pillow Pack	28 dB	No	250 PR
CC-01-000	3M™ E-A-R™ Classic™ Earplugs (corded)	29 dB	Yes	200 PR
PD-01-001	3M™ E-A-R™ Classic™ Earplugs, Dispenser Refill	28 dB	No	500 PR

3M™ E-A-Rsoft™ Yellow Neons™ Earplugs

3M™ E-A-Rsoft™ Yellow Neons™ Earplugs have a smooth texture for in-ear comfort and are made of an advanced foam formulation for all-day wearability. Offered in one size to comfortably fit in a wide range of ears, these high attenuation earplugs are ideal for many different noisy applications. Brightly coloured for hearing protection compliance sighting, 3M™ E-A-Rsoft™ Yellow Neons™ Earplugs are an excellent choice for any hearing conservation program.



Available with cord	✓
Moisture resistant	
Reusable	
Slow recovery foam	✓
No roll down required	

Dispenser available,
uncorded models



Product number	Product description	Attenuation rating (SNR)	Corded	Case qty
ES-01-001	3M™ E-A-Rsoft™ Yellow Neons™ Earplugs	36 dB	No	250 PR
311-4266	3M™ E-A-Rsoft™ Yellow Neons™ Earplugs (corded)	36 dB	Yes	250 PR
PD-01-002	3M™ E-A-Rsoft™ Yellow Neons™ Earplugs, Dispenser Refill	36 dB	No	500 PR

3M™ Foam Earplugs

Soft, hypoallergenic foam and a tapered design help provide a noise-reducing seal in the ear canal. 3M™ 1100 Earplugs and 3M™ 1110 Earplugs are easy to roll down, and once fitted in the ear, soften with body temperature for comfortable extended wear.



Available with cord	✓
Moisture resistant	
Reusable	
Slow recovery foam	✓
No roll down required	

Dispenser available,
uncorded models



Product number	Product description	Attenuation rating (SNR)	Corded	Case qty
1100	3M™ 1100 Earplugs	37 dB	No	200 PR
1100	3M™ 1100 Earplugs, Dispenser Refill	37 dB	No	2000 PR
1110	3M™ 1110 Earplugs (corded)	37 dB	Yes	100 PR

3M™ E-A-R™ One Touch™ Pro Earplug Dispenser

Conveniently provide hearing protection where employees need it. The 3M™ One Touch™ Pro Earplug Dispenser dispenses one earplug at a time with a simple twist. No more expense and waste of individually wrapped plugs. Made from ABS plastic with a powder-coated steel-back plate, it's designed for challenging environments - indoors and outdoors.

- ▶ Accurately dispenses one earplug at a time
- ▶ Dispenses earplug directly into hand
- ▶ Powder coated steel back plate and durable ABS and POM plastic for tough environments
- ▶ Free-standing or wall-mounted, could be located inside or outside
- ▶ Mounting holes designed to fit a variety of competitive dispensers
- ▶ The innovative design protects against sun, rain and wind, when dispensing earplugs outside



3M™ E-A-R™
Classic™ Earplugs



3M™ E-A-Rsoft™
Yellow Neons™ Earplugs



3M™ 1100 Earplugs

Product number	Product description	Case qty
391-0000	3M™ E-A-R™ One Touch™ Earplugs Dispenser	1 EA
PD-01-001	3M™ E-A-R™ Classic™ Earplugs Refill Bottle	500 PR
PD-01-002	3M™ E-A-Rsoft™ Yellow Neons™ Earplugs Refill Bottle	500 PR
1100-R	3M™ 1100 Earplugs Refill Bottle	500 PR

3M™ Push-to-fit Earplugs

Simply hold 3M™ Push-to-fit Earplugs by the stem then push them into place – there is no roll-down required for a clean and comfortable fit. The soft foam tip quickly adjusts to the shape of the ear to help create a noise-reducing seal. Since you don’t touch the foam tip, they are easy to fit and keep clean, even when your hands are dirty or you are wearing gloves.

3M™ E-A-R™ Flexible Fit Earplug HA

3M™ Push-to-Fit earplugs are very easy to insert since there is no roll down 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.

Available with cord	✓
Moisture resistant	
Reusable*	✓
Slow recovery foam	
No roll down required	✓
Washable foam	✓



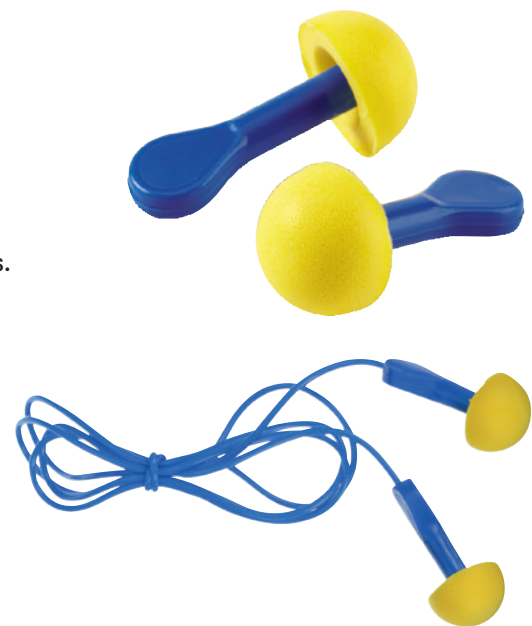
Product number	Product description	Attenuation rating (SNR)	Corded	Case qty
7100212747	3M™ E-A-R™ Flexible Fit Earplug HA 328-1000, CE, uncorded, pillow pack	35 dB (30dB**)	No	400 PR
7100212752	3M™ E-A-R™ Flexible Fit Earplug HA 328-1001, CE, corded, pillow pack	35 dB (30dB**)	Yes	500 PR

* For up to 2 weeks
 ** One hand insertion

3M™ E-A-R™ Express™ Earplugs

The unique pod design of 3M™ E-A-R™ Express™ Earplugs allows the foam to compress easily so the earplug slides gently into the ear and expands slowly, making an effective seal for most ear canals. A flexible stem makes fitting easy.

Available with cord	✓
Moisture resistant	
Reusable	
Slow recovery foam	
No roll down required	✓



Product number	Product description	Attenuation rating (SNR)	Corded	Case qty
EX-01-002	3M™ E-A-R™ Express™ Earplugs, Pillow Pack	28 dB	No	100 PR
EX-01-001	3M™ E-A-R™ Express™ Earplugs (corded)	28 dB	Yes	100 PR

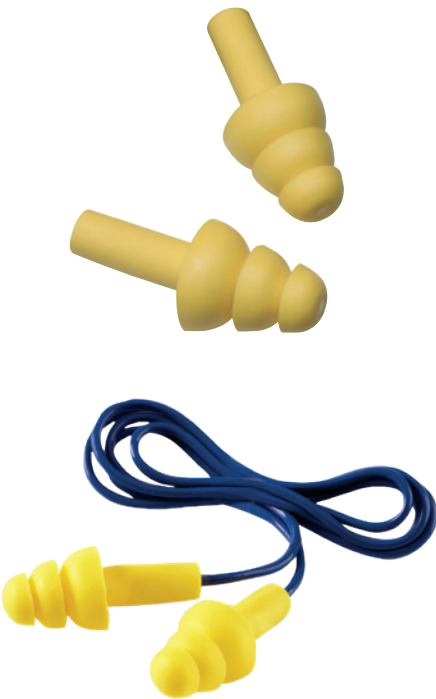
3M™ Reusable Earplugs

These durable, long-lasting earplugs are made from soft, flexible materials that are washable and reusable. The tapered tips are pre-moulded to fit a wide range of ear sizes comfortably. Available in a variety of styles and protection levels.

3M™ E-A-R™ UltraFit™ Earplugs

A proven triple-flange design and pliable, pre-moulded material make 3M™ E-A-R™ UltraFit™ Earplugs a fit for most ear canals. These durable, reusable earplugs are easy to use again and again, reducing waste. They can be cleaned easily with soap and water. Since there is no need to roll them down before fitting, simply push them into the ears for clean and comfortable noise reduction. Each pair includes a tipped reusable cord which can be removed and reinserted to give flexibility to wear the plugs as either corded or uncorded.

Available with cord	✓
Moisture resistant	✓
Reusable	✓
Slow recovery foam	
No roll down required	✓



Product number	Product description	Attenuation rating (SNR)	Case qty
UF-01-000	3M™ E-A-R™ UltraFit™ Earplugs, Pillow Pack, Corded	32 dB	50 PR

3M™ Banded Hearing Protectors

3M™ Banded Hearing Protectors are an easy-to-use, convenient alternative to earplugs and earmuffs. They are quick to put on and take off and may be stored around the neck in between uses, making them ideal for intermittent use. Banded hearing protectors offer simplicity to help ensure your workers are receiving the right level of protection. Most models are available with replacement tips, which make them a very cost-effective option.

3M™ E-A-Rcaps™

One of the lightest banded hearing protectors on the market, 3M™ E-A-Rcaps™ banded hearing protectors feature comfortable foam caps on a flexible band to block the ear canal opening. Ideal for visitors to a noisy facility or people who need hearing protection for short periods of time. They are designed to be worn under the chin which means they do not interfere with other head PPE such as hard hats.

Available with cord

Moisture resistant

Reusable

Slow recovery foam

No roll down required

✓

✓



Replacement
pods available



Product number	Product description	Attenuation rating (SNR)	Case qty
EC-01-000	3M™ E-A-Rcaps™ Hearing Protector	23 dB (U-T-C)	10 EA
ES-01-301	3M™ E-A-Rcaps™ Replacement Pods	23 dB (U-T-C)	50 PR

3M™ Earmuffs

Earmuffs are a popular choice in hearing protection due to their ease of use and consistent fit. Available in headband, neckband, helmet attached and folding models, earmuffs help meet hearing protection needs in many common applications.

3M™ PELTOR™ Optime™ I Earmuffs

3M™ PELTOR™ Optime™ I Earmuffs offer versatile protection and are very lightweight providing high wearer comfort. They combine a low profile with generous inner depth which makes them easy to combine with other equipment, allowing the ear to rest comfortably. 3M™ PELTOR™ Optime™ I Earmuffs are 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.



Headband



P3* helmet attachment

Product number	Product description	Attenuation rating (SNR)	Case qty
H510A	3M™ PELTOR™ Optime™ I Earmuff Headband, Yellow	27 dB	10 EA
H510P3E	3M™ PELTOR™ Optime™ I Earmuff Helmet Mounted, Yellow	26 dB	10 EA

3M™ PELTOR™ Optime™ II Earmuff

The 3M™ 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.

3M™ PELTOR™ Optime™ II Earmuff is a suitable choice for environments with substantial industrial noise or construction machinery, airports and agricultural work.



Headband



P3* - helmet attachment

Product number	Product description	Attenuation rating (SNR)	Case qty
H520A	3M™ PELTOR™ Optime™ II Earmuff Headband, Green	31 dB	10 EA
H520P3E*	3M™ PELTOR™ Optime™ II Earmuff Helmet Mounted, Green	30 dB	10 EA

3M™ PELTOR™ Optime™ III Earmuff

3M™ 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.

The sealing rings are broad and filled with soft plastic foam for the best fit and low contact pressure. The 3M™ PELTOR™ Optime™ III Earmuff stands for effective protection and highest comfort for the wearer.



Headband



P3* helmet attachment

Product number	Product description	Attenuation rating (SNR)	Case qty
H540A	3M™ PELTOR™ Optime™ III Earmuff Headband, Black / Red	35 dB	10 EA
H540P3*	3M™ PELTOR™ Optime™ III Earmuff Helmet Mounted, Black / Red	34 dB	10 EA

3M™ PELTOR™ Earmuffs X Series

3M™ PELTOR™ Earmuff X Series earmuffs combine the 3M™ PELTOR™ legendary hearing protection knowledge with our most advanced technologies, creating our most comfortable, durable earmuff. A broad range of protection levels make it easier to find the correct level of protection.



The 3M™ PELTOR™ Earmuff X Series is available in attenuations 27 dB to 36 dB and the option to add Bluetooth® communication with 3M™ PELTOR™ Wireless Communication Accessory.



**3M™ PELTOR™
Earmuff X1
Green**



**3M™ PELTOR™
Earmuff X2
Yellow**



**3M™ PELTOR™
Earmuff X3
Red**



**3M™ PELTOR™
Earmuff X4
Bright green**



**3M™ PELTOR™
Earmuff X5
Black**

** Electrically insulated. The bracket arms of helmet attachment earmuffs are made of non-conductive (sometimes referred to as 'dielectric') material whilst the metal components of the attachment mechanisms are covered in non-conductive material. The metal wire of the headband earmuffs are covered in a non-conductive material. These products were found to be electrically insulated, withstanding a voltage up to 1,2 kV, at an external laboratory against a modified test method based on EN 397:2012 under dry conditions. The user must determine the overall suitability of this product for the intended application taking into account any hazards other than noise for which this product is tested and approved.

3M™ PELTOR™ Earmuff X4

The 3M™ PELTOR™ Earmuff X4 combines high attenuation with a sleek, low-profile, aesthetically pleasing design. The fluorescent yellow-green colour provides high visibility, while the innovative foam earcup inserts and spacers help boost attenuation.

- ▶ 3M™ PELTOR™ Earmuff X4A features an electrically insulated (dielectric) wire headband**
- ▶ Twin headband design helps reduce heat buildup with good fit and balance
- ▶ Slim and lightweight compared to other high-attenuating earmuffs
- ▶ Colour coded fluorescent yellow-green for excellent visibility
- ▶ New ear cushion foam technology for an effective acoustic seal and reliable protection



Product number	Product description	Attenuation rating (SNR)	Case qty
X4A	3M™ PELTOR™ Earmuff X4 Headband, Black / Bright Green	33 dB	10 EA
X4P3E	3M™ PELTOR™ Earmuff X4 Helmet Mounted, Black / Bright Green	32 dB	10 EA
HYX4	Hygiene Kit	-	10 EA

3M™ PELTOR™ Earmuff X5

The 3M™ PELTOR™ Earmuff X5 offers highest earmuff Noise Reduction Rating (SNR) in the market today for very high noise situations. The high attenuation provided by these earmuffs is a result of the optimum combination of specially-formulated foam in the earcups and cushions and the innovative spacer and cup design.

- ▶ 3M™ PELTOR™ Earmuff X5A features an electrically insulated (dielectric) wire headband**
- ▶ Twin headband design helps reduce heat buildup with good fit and balance
- ▶ Wire headband offers comfortable pressure during prolonged usage
- ▶ Despite larger earcups, 3M™ PELTOR™ Earmuff X5 is lightweight with excellent balance and comfort
- ▶ Very high noise attenuation, SNR 37 dB* in headband and 36 dB in helmet mounted version



Product number	Product description	Attenuation rating (SNR)	Case qty
X5A	3M™ PELTOR™ Earmuff X5 Headband, Black	37 dB	10 EA
X5P3E	3M™ PELTOR™ Earmuff X5 Helmet Mounted, Black	36 dB	10 EA
HYX5	Hygiene Kit	-	10 EA

Validation

1 Fit

Have the employee insert their hearing protection.

2 Test

Connect to microphones and begin speaker test sound.

3 Assess

Use PAR to customise hearing protector selection.



10 dB
Right



29 dB
Left

Fail

A 'fail' result means the hearing protection is either not inserted properly or is the wrong type or size for the worker's ear canal.

NOTE:

Finding out each employee's PAR is the first step to a successful conservation program. Once a worker's PAR is measured, you can determine if they're using the right hearing protection and ensure they're trained on using it properly.



Pass

A 'pass' result means the hearing protection is inserted properly and provides sufficient protection for the worker's specific job.

3M™ E-A-Rfit™ Dual-Ear Validation System

Fit testing is key, so make sure you get results you can trust. The 3M™ E-A-Rfit™ Dual-Ear Validation System measures the effectiveness of the earplug from inside the ear, providing accurate quantitative results. And because you can simultaneously test both ears, you'll have more time to educate employees on the importance of fit and compliance.

Features:

- ▶ Dual-ear testing
- ▶ Fast, clear accurate results
- ▶ Earmuff testing capability
- ▶ Tests all 7 frequencies
- ▶ Seamless software integration
- ▶ Science-based, quantitative testing
- ▶ Compact design



Product #	Abbreviated description	Case qty
393-1000	3M™ E-A-Rfit™ Kit – Validation System includes the Software, Speaker and Impact-Resistant Carrying Case	1 KIT
393-2000-50	3M™ E-A-Rsoft™ Yellow Neons™ Probed Test Plugs	50 PR
393-2001-50	3M™ E-A-R™ UltraFit™ Probed Test Plugs	50 PR
393-2003-50	3M™ E-A-R™ Classic™ Probed Test Plugs	50 PR
393-3005-2	3M™ PELTOR™ Earmuff X4/X5 Probed Test Ear Muff Cushion	2 PR
393-2008-50	3M™ E-A-R™ Express™ Probed Test Plugs	50 PR
393-2010-50	3M™ 1100 Model Probed Test Plugs	50 PR
393-2020-50	3M™ E-A-Rcaps™ Probed Test Plugs	50 PR
393-3004-2	3M™ PELTOR™ Optime™ Probed Test Cushion	2 PR



Communication Solutions

Close up or far away 3M™ PELTOR™ Communication Solutions for noisy environments make it possible for users of hearing protectors to communicate very effectively with their immediate environment and with people further away. This brochure focuses on the industrial solutions available.

3M™ PELTOR™ Communication Solutions

The Sound Solution

First-class communication and hearing protection! There was a time when wearing hearing protectors meant being isolated and out of contact. Those days are over. Today, 3M™ PELTOR™ offers first-class communication solutions that not only make your working day safer and more efficient, but also much nicer!

3M™ PELTOR™ products are developed for all environments where high safety must be combined with communication. Industrial environments, construction sites, agriculture and forestry are a few examples.

We have developed several models to ensure there's a 3M™ PELTOR™ Headset for every situation. Headband models for all-round use, and models with helmet attachments for people who wear safety helmets at work.

To ensure easy use of our products and good functions for all environments we use advance technology such as Level Dependent technology and Bluetooth®.



Oil and gas



Mining



Hunting and sport shooting



Airport ground handling



Military and law enforcement



Energy and utilities



Transportation



Industry



Construction

3M™ PELTOR™ Communication Solutions

The importance of wearing hearing protection 100% of time exposed



100% usage
Gives the expected protection.



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



90% usage
Virtually no protection.

Safety

To be effective, a hearing protector should be used 100% of the time in noisy environments. Even taking it off for a short time dramatically reduces its effectiveness and greatly increases the risk of hearing damage. The 3M™ PELTOR™ Communication Solutions encourage longer use because the wearer feels less isolated and can communicate with others more easily.

Function symbols

To help you to understand the functionality of the products you will find below symbols on each product page.



Hearing protection with level-dependent function for ambient listening



Hearing protection that features Bluetooth® technology, for wireless connection to mobile phone, or communication radio



Hearing protection with built-in two-way radio



Hearing protection with built-in FM radio receiver



Hearing protection with external audio input



Hearing protection for communication with external two-way radio

Essential products and functions



3M™ PELTOR™
EEP-100 EU



3M™ PELTOR™
ProTac III



3M™ PELTOR™
WorkTunes™
Pro



3M™ PELTOR™ WS
ProTac XPI



3M™ PELTOR™
LiteCom



3M™ PELTOR™ WS
LiteCom Plus



3M™ PELTOR™ Communication Solutions

3M™ PELTOR™ Electronic Ear Plug EEP-100 EU

3M™ PELTOR™ Electronic Earplug helps protect against harmful noise, whilst allowing ambient sounds to be heard at a level below 82dB. It increases your ability to communicate with nearby colleagues, as well as hearing warning signals, approaching vehicles, or sounds in machines and processes.



Features and Benefits:

- High attenuating hearing protector (SNR from 32dB to 36dB)
- Level-dependent function for ambient listening
- Easily compatible with many head or respiratory protections
- Plug & Play: only one button
- 16 hours operating time
- USB charging integrated to the storage case



Attenuation* UltraFit

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	34.5	31.5	36.2	33.4	34.8	34.9	38.8
Standard Deviation (dB)	6.0	5.4	5.6	4.3	3.8	5.0	4.0
Assumed Protection (dB)	28.5	26.1	30.6	29.1	31.0	29.9	34.8

SNR=32dB H=31dB. M=30dB. L=29dB

CCC-GRM-25

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	35.5	32.5	37.1	38.0	37.6	39.5	45.5
Standard Deviation (dB)	4.5	4.0	4.4	3.7	2.9	4.6	4.2
Assumed Protection (dB)	30.9	28.4	32.7	34.3	34.6	34.9	41.3

SNR=36dB H=35dB. M=34dB. L=32dB



Earpiece power

Battery Type: Lithium Ion

Battery Life: Up to 16 Hours

Battery Charge Time: Approximately 180 Minutes

Volume Steps: Low, Normal, High

Case USB Type: Micro B

Standards

Waterproof Rating: Complies with IP54 with cover and USB port closed

SNR: PPE directive 89/686/EEC

Physical characteristics

Weight: Box containing charger, 2 earpieces,

4 pair communications eartips, USB cable - 240g

Weight: Charger - 57.1g

Weight: 1 earpiece - 4g

3M™ PELTOR™ accessories

TEP-CORD	3M™ PELTOR™ Tactical Earplug Replacement Cord
370-TEPL-25	3M™ UltraFit™ Communication Tips Replacement, Large, 25 pairs
370-TEPM-25	3M™ UltraFit™ Communication Tips Replacement, Medium, 25 pairs
370-TEPS-25	3M™ UltraFit™ Communication Tips Replacement, Small, 25 pairs
PELTIP5-01	3M™ Torque™ Eartips, 50 pairs
CCC-GRM-25	3M™ PELTOR™ Communication Tip, Triple C, 25 pairs
TEP-WINDSCREEN	3M™ PELTOR™ TEP/LEP Windscreen Foam

* For further attenuation information please visit www.3M.eu/PPEsafety

www.3M.co.uk/PPEsafety

3M™ PELTOR™ Communication Solutions

3M™ PELTOR™ ProTac™ III Headset

The 3M™ PELTOR™ ProTac™ III hearing protector helps protect against harmful noise, whilst allowing ambient sounds to be heard at a level below 82dB. It increases your ability to communicate with nearby colleagues, as well as hearing warning signals, approaching vehicles, or sounds in machines and processes.



Features and Benefits:

- Hearing protector
- Level-dependent function for ambient listening
- 3.5 mm listen only stereo input (limited to 82 dB) for connection to external devices (e.g. cell phone, two-way radio, iPod)
- Voice guided menu system
- Auto power off: The headset will turn off after 4 hrs of non-use to save battery
- Low-battery warning at low battery level
- To reduce the corrosion caused by sweat the electronics are located in the outer part of the cup



Attenuation*

MT13H221A 3M™ PELTOR™ ProTac™ III Headset

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.0	24.0	28.0	36.9	37.3	39.3	35.4
Standard Deviation (dB)	3.2	2.0	29.5	3.3	4.9	3.2	3.9
Assumed Protection (dB)	13.8	22.0	2.6	33.6	32.4	36.1	31.5

EN 352-1:2002 SNR=32 dB H=34 dB M=29 dB L=22 dB

MT13H220A 3M™ PELTOR™ ProTac™ III Slim Headset

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	13.3	17.4	22.3	28.0	30.8	37.6	37
Standard Deviation (dB)	3.2	1.8	2.3	3.2	3.4	2.8	4.8
Assumed Protection (dB)	10.1	15.6	20.0	24.8	27.4	34.8	32.2

EN 352-1:2002 SNR=26 dB H=29 dB M=23 dB L=17 dB

* For further attenuation information please visit www.3M.eu/PPEsafety



3M™ PELTOR™ ProTac™ III

MT13H221A Headband

Available in: Black

SNR: 32dB

Other 3M™ PELTOR™ ProTac™ III options



3M™ PELTOR™ ProTac™ III Headset, black, helmet attachment

MT13H221P3E Helmet attachment

Available in: Black

SNR: 31dB

3M™ PELTOR™ ProTac™ III Slim Headset

MT13H220A Headband

Available in: Black

SNR: 26dB

3M™ PELTOR™ ProTac™ III Slim Headset, black, helmet attachment

MT13H220P3E Helmet attachment

Available in: Black

SNR: 25dB

Battery Type: 2x AA (Alkaline)

Operating time: Approximately 1 00 hours of battery lifetime

Net Weight (Incl. Batteries): ProTac™ III Slim MT13H220A (headband) = 303g
ProTac™ III MT13H221A (headband) = 355g
ProTac™ III Slim MT13H220P3E (helmet attachment) = 322g
ProTac™ III MT13H221P3E (helmet attachment) = 374g

Operating temperature: -20°C to +55°C (battery dependent)

Wired Connectivity: 3.5mm listen-only stereo input jack (limited to 82 dB)

3M™ PELTOR™ accessories

HY220 Hygiene kit
FL6CE/1 3M™ PELTOR™ FL6CE/1 3.5 mm Cable
HY100A 3M™ PELTOR™ HY100A Clean Hygiene Pad

3M™ PELTOR™ Communication Solutions

3M™ PELTOR™ WS™ ProTac XPI

The 3M™ PELTOR™ WS™ ProTac XPI Headset is equipped with a level-dependent function for situational awareness and communication. The headset features Bluetooth wireless technology and can also be connected via a jack to provide high quality communication and streaming.

The level-dependent function helps you hear ambient sounds such as external alarm signals or approaching vehicles. It also allows face to face communication in quiet environments.



Features and Benefits:

- Hearing protector (SNR: 31dB)
- Noise cancelling speech microphone for clear communication in noisy environments
- Stainless steel wire headband for comfortable and consistent pressure
- Bluetooth® wireless technology for communication and streaming high quality stereo sound
- Level-dependent function for situational awareness and communication
- External radio connection jack (only available in FLX2 Connector version)
- Easy to use with four button operation
- Ghost voice guided menu system
- Auto power off in 2 hours from last activation
- Also available as neckband or helmet attachment



Connects with

- Bluetooth compatible devices
- Two-way radio (via FLX2 connection)

Attenuation*

MT15H7AWS6 / MT15H7AWS6-111

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.4	24.6	35.8	36.0	34.3	35.0	34.8
Standard Deviation (dB)	3.1	1.8	3.2	2.7	2.3	3.0	3.4
Assumed Protection (dB)	11.3	22.8	32.6	33.3	32.0	32.0	31.4

EN352-1:2002 SNR=31 dB H=33 dB M=30 dB L=20 dB

MT15H7P3EWS6 / MT15H7P3EWS6-111

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	18.7	25.4	33.0	38.0	34.3	34.4	34.3
Standard Deviation (dB)	3.2	3.4	3.3	4.5	3.8	3.6	5.0
Assumed Protection (dB)	15.5	22.0	29.7	33.5	30.5	30.8	29.3

EN352-3:2002 SNR=31 dB H=31 dB M=30 dB L=23 dB

3M™ PELTOR™ accessories

HY83	3M™ PELTOR™ HY83 Hygiene kit, 2 foam liners, 2 snap-in cushions	FR08	3M™ PELTOR™ FR08 Power supply with USB connector 7000108521
HY80	3M™ PELTOR™ Gel snap-in cushions 7000127468	FR09	3M™ PELTOR™ FR09 Battery charger with USB connector
ACK053	3M™ PELTOR™ ACK053 Rechargeable NiMH battery, 2100mAh	M171/2	3M™ PELTOR™ M171/2 Windshield for MT73 speech microphone 2ea

3M™ PELTOR™ WS™ ProTac XPI Headset
MT15H7AWS6 Headband
SNR: 33dB

Other 3M™ PELTOR™ WS™ ProTac XPI options



3M™ PELTOR™ WS™ ProTac XPI Headset, helmet attachment
MT15H7P3EWS6 Helmet attachment
SNR: 31dB

3M™ PELTOR™ WS™ ProTac XPI FLX2 Headset
MT15H7AWS6-111 Headband
SNR: 31dB

3M™ PELTOR™ WS™ ProTac XPI FLX2 Headset
MT15H7P3EWS6-111
Helmet attachment
SNR: 31dB

Frequency Range: 2400-2483.5 MHz

Bluetooth®

Version: 4.2+EDR

Battery Type: 2xAA NiMH or alkaline batteries, 1,2-1,5 V

Operating Time: Level Dependent + Bluetooth active: Approximately 45 hours of battery lifetime with included alkaline batteries

Net Weight, (incl. batteries): Headband:
MT15H7AWS6 = 365g
MT15H7AWS6-111 = 373g
Helmet Attachment:
MT15H7P3EWS6 = 387g
MT15H7P3EWS6-111 = 395g

Operating Temperature: -20°C to +55°C (battery dependent)

Wired Connectivity: Available with flex input jack

M60/2	3M™ PELTOR™ M60/2 Windshield for Level-dependent microphones 2ea
HY100A	3M™ PELTOR™ HY100A Clean Hygiene Pad, 100pcs
HYM1000	3M™ PELTOR™ HYM1000 Microphone protection, 5 meters

3M™ PELTOR™ Communication Solutions

3M™ PELTOR™ WorkTunes™ Pro Headset

The 3M™ PELTOR™ WorkTunes™ Pro Headset helps protect you from potentially harmful workplace noise while at the same time enjoy listening to the built-in FM or AM/FM radio. The built-in antenna, fast digital tuning and ability to store stations makes the hearing protector flexible and easy to work with.



Features and Benefits:

- Hearing protector (SNR : 32dB)
- FM or AM/FM radio headset with built-in antenna
- Voice guided menu system with announced frequencies
- Store up to 5 stations
- 3.5mm listen only stereo input (limited to 82dB) for connection to external devices (e.g. cell phone, two-way radio, iPod)
- Auto power off, the headset will turn off after 4hrs of non-use to save battery
- Low-battery warning at low battery level



Attenuation*

HRXS221A and HRXS220A EN 352-1:2002

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.0	24.0	29.5	36.9	37.3	39.3	35.4
Standard Deviation (dB)	3.2	2.0	2.6	3.3	4.9	3.2	3.9
Assumed Protection (dB)	13.8	22.0	26.9	33.6	32.4	36.1	31.5

SNR=32 dB H=34 dB M=29 dB L=22 dB

HRXS221P3E and HRXS220P3E EN 352-3:2002

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	16.6	22.0	29.1	36.3	36.4	38.7	34.2
Standard Deviation (dB)	2.7	2.2	2.9	3.4	3.9	4.2	4.0
Assumed Protection (dB)	2.7	2.2	2.9	3.4	3.9	4.2	4.0

SNR=31 dB H=33 dB M=28 dB L=21 dB

* For further attenuation information please visit www.3M.eu/PPEsafety



3M™ PELTOR™ WorkTunes™ Pro FM Radio Headset

HRXS220A Headband

Available in: Black

SNR: 32dB

Other 3M™ PELTOR™ WorkTunes™ Pro FM Radio Headset options



3M™ PELTOR™ WorkTunes™ Pro FM Radio Headset HRXS220P3E Helmet attachment

Available in: Black
SNR: 31dB

3M™ PELTOR™ WorkTunes™ Pro AM/FM Radio Headset HRXS221A Headband
Available in: Black
SNR: 32dB

3M™ PELTOR™ WorkTunes™ Pro AM/FM Radio Headset HRXS221P3E Helmet attachment
Available in: Black
SNR: 31dB

Battery Type:	2x AA (Alkaline)
Operating time:	Approximately 40 hours of battery lifetime
Net Weight (incl. batteries):	WorkTunes Pro FM HRXS220A (headband) = 351g WorkTunes Pro FM HRXS220P3E (helmet attachment) = 369g WorkTunes Pro AM/FM HRXS221A (headband) = 353g WorkTunes Pro AM/FM HRXS221P3E (helmet attachment) = 371g
Operating temperature:	-20°C to +55°C (battery dependent)
Wired Connectivity:	3,5 mm AUX input jack (limited to 82dB(A))

3M™ PELTOR accessories

HY220	Hygiene kit
FL6CE/1	3M™ PELTOR™ FL6CE/1 3.5 mm Cable
HY100A	3M™ PELTOR™ HY100A Clean Hygiene Pad

3M™ PELTOR™ Communication Solutions

3M™ PELTOR™ LiteCom

With 3M™ PELTOR™ LiteCom communicating in noisy environments has been made easy – and safe. LiteCom is a tough and rugged headset designed to cope with demanding use in many different working environments.

The built-in two-way radio has got 8 channels with 38 subchannels, and has a range of up to 3km. It lets you talk hands-free and work safely regardless of harmful noise levels.



Features and Benefits:

- Hearing protector (SNR : 32dB)
- Built-in two-way radio
- 8 channels in the PMR 446MHz band
- 38 subchannels
- Range of up to 3km depending on conditions
- Voice operated transmission (VOX)
- Auto power off function
- Battery status indication
- Voice guided menu system



3M™ PELTOR™ LiteCom
MT53H7A4400-EU Headband
SNR: 32dB

Other 3M™ PELTOR™ LiteCom options



3M™ PELTOR™ LiteCom
MT53H7B4400-EU Neckband
SNR: 32dB



3M™ PELTOR™ LiteCom
MT53H7P3E4400-EU Helmet attachment
SNR: 33dB

Frequency range:	446 MHz (PMR)
Battery Type:	2X AA 1.2–1.5 V batteries or NiMH (2,4 V)
Operating time:	Approximately 20 hours of battery lifetime with included alkaline batteries
Net Weight (incl. batteries):	394g (headband) 418g (helmet att.) 384g (neckband)
Operating temperature:	-20°C to +55°C (battery dependent)

Attenuation*
MT53H7A4400-EU Headband

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	18.1	24.3	32.1	36.2	34.7	39.2	36.0
Standard Deviation (dB)	2.4	1.7	2.2	2.6	3.6	3.3	2.4
Assumed Protection (dB)	15.6	22.6	29.9	33.6	31.1	35.9	33.6

SNR=32dB H=33dB, M=30dB, L=23dB

3M™ PELTOR™ accessories	
HY79	Hygiene kit
ACK053	Rechargeable battery
FR08	Power supply
FR09	Battery charger
MT53N-12	Electret microphone

* For further attenuation information please visit www.3M.eu/PPESafety

3M™ PELTOR™ Communication Solutions

3M™ PELTOR™ WS™ LiteCom Plus

3M™ PELTOR™ WS™ LiteCom Plus with Bluetooth® opens up a world of communication with your built-in two-way radio headset at the hub. You become a mobile, hands-free communication center, the built-in two-way radio and wireless connections to your computer and cell phone. You can take your calls, or stream music thanks to electronics that let you switch easily between functions. The level-dependent technology lets you hear ambient sounds such as external alarm signals or approaching vehicles. It also allows face to face communication at close distance. Robust design (IP54 certified), clear controls and an intuitive menu system.



Features and Benefits:

- Hearing protector
- Built-in two-way radio communication
- Connect different devices (radio, mobile phone) via Bluetooth® Mutli-Point
- 16 channels in the PMR 446 MHz band and 121 subchannels
- IP54 certified
- Range of up to 3km depending on conditions
- Level dependent technology for situational awareness
- A separate audio input enables connecting equipment such as mobile phones or external two-way radios
- Voice operated transmission (VOX)
- Auto power off function
- Voice guided menu system
- Noise cancelling waterproof microphone (IP68)

Connects with

- Bluetooth compatible devices
- Two-way radio (via flex cable or Bluetooth®)

Attenuation*

MT73H7B4410WS6EU Headband

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.9	24.0	32.7	32.5	36.2	40.4	39.1
Standard Deviation (dB)	2.5	2.0	3.2	2.8	3.4	3.9	3.2
Assumed Protection (dB)	12.4	22.0	29.5	29.7	32.8	36.5	35.9

SNR=31dB H=34dB, M=29dB, L=21dB

MT73H7B4310WS6EU Headband

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.6	22.7	33.5	36.9	37.5	41.7	39.3
Standard Deviation (dB)	2.2	1.9	2.3	3.1	4.0	2.7	1.8
Assumed Protection (dB)	12.4	20.8	31.2	33.8	33.5	39.0	37.5

SNR=32dB H=36dB, M=30dB, L=21dB

* For further attenuation information please visit www.3M.eu/PPEsafety



3M™ PELTOR™ WS™ LiteCom Plus
MT73H7A4410WS6EU Headband
SNR: 33dB

Other 3M™ PELTOR™ WS™ LiteCom Plus options



3M™ PELTOR™ WS™ LiteCom Plus
MT73H7B4410WS6EU
Neckband
SNR: 31dB



3M™ PELTOR™ WS™ LiteCom Plus
MT73H7P3E4410WS6EU
Helmet attachment
SNR: 31dB

Frequency range: PMR 446MHz
or LPD 433MHz

Bluetooth® Version: 2.1+EDR

Battery Type: Rechargeable battery pack included or 2x standard AA batteries

Operating time: Approximately 18 hours

Net Weight (incl. batteries): 449g (headband)
434g (helmet att.)
434g (Neckband)

Operating temperature: -20°C to +50°C
(battery dependent)

3M™ PELTOR™ accessories

ACK081	Battery
FR08	Power supply
AL2AI	Charging cable for ACK081
HY83	Hygiene kit
HY80	Gel Rings
HYM1000	Mic Tape

3M™ PELTOR™ Communication Solutions

3M™ Versaflo™ Helmets M-300 Series with 3M™ PELTOR™ LiteCom solutions

M-300 Series Helmets meet the highest powered respirator performance requirements (TH3) for this type of product when used with specific 3M™ Air Delivery Units. Now approved to be used with 3M™ PELTOR™ LiteCom headsets, M-300 Helmets offer you the possibility to communicate effectively whilst protecting your hearing in noisy environments.

Features and Benefits:

Highly versatile rigid headtops

- Head protection approved according to EN 397
- Integrated protection from multiple hazards (e.g. respiratory, impact, splash hazards)

Modern, well balanced design

- Lightweight with excellent balance
- Fully-adjustable head suspension
- A deflector allows users to direct the airflow inside the headtop for increased control and comfort

Visor design

- Visor design combines excellent peripheral and downward vision with good optical clarity
- Lenses provide chemical and scratch resistance

Typical applications

- Smelting and foundry applications
- Grinding
- Chemical processing and plant maintenance
- Agricultural applications
- Construction and renovation
- Demolition



Note: 3M does not accept responsibility or liability, direct or consequential, arising from reliance upon any information provided and the user should determine the suitability of the products for their intended use. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence or fraudulent misrepresentation.

Electronic Protectors

Size Ranges: S = Small, M = Medium, L = Large

Helmet model	Wedge	Product number	Description	Size
Versaflo™ M-306 or M-307 Helmet	Z3AF	MT**H79P3*	3M™ PELTOR™ Helmet Att. Headsets, Product numbers beginning with MT7H or MT53H except model number ending in -77	M/L
		MT7H540P3*	3M™ PELTOR™ Twin Cup Headsets, Helmet attached, except model number ending in -77	M/L
		MT*H7P3*	Helmet attached WS™ ProTac XP, WS™ Headset XP, Tactical XP, LiteCom, WS™ LiteCom, LiteCom PRO II, LiteCom Plus product numbers beginning with MT7H or MT53H	M/L



2 options of built-in microphones:

- Dynamic
- Electret

3M™ PELTOR™
MT53V/1
(ELECTRET)



3M™ PELTOR™
MT7V/1
(DYNAMIC)



red dot design award
honourable mention 2011





Technical Information

Technical information

Noise regulations

The European Physical Agent (Noise) Directive 2003/10/EC 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 Exposure 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 exposure 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 352-1	General requirements - earmuffs
EN 352-2	General requirements - earplugs
EN 352-3	General requirements - helmet mounted earmuffs
EN 352-4	Safety requirements and testing - level dependent earmuffs
EN 352-5	Safety requirements and testing - active noise reduction earmuffs
EN 352-6	Safety requirements and testing - earmuffs with electrical audio input
EN 352-7	Safety requirements and testing - level dependent earplugs
EN 352-8	Safety requirements and testing - entertainment audio earmuff
EN 458	Guidance document - selection, care, use, maintenance of hearing protectors

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.

Hearing protection use and care

Roll down earplugs

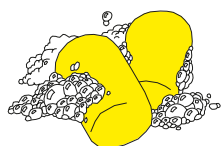


How to use

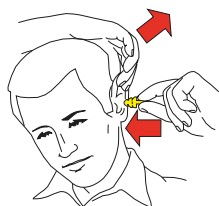
Slowly roll and compress foam earplugs into a very thin cylinder. While compressed, insert the earplug well into the ear canal. Fitting is easier if you reach around the head to pull the ear outward and upward during insertion.

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

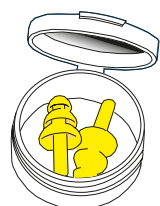


How to use

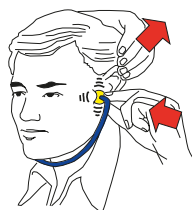
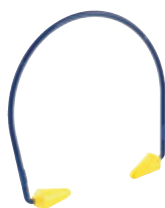
Reach around the back of your head and pull outward on the ear while inserting the plug until you feel it sealing. This may seem tight at first, especially if you have never worn earplugs.

Care and cleaning

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

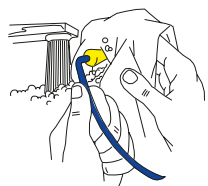


How to use

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.

Care and cleaning

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

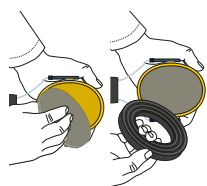


How to use

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.

Care and cleaning

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 etc.

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.



Product number	Product description	Case qty
HY100A	100 pairs on a roll in a dispenser	
HY100A-01	20 envelopes x 5 pairs in a dispenser	



3M™ PELTOR™ Optime™ certified helmet attachment options

Helmet brand	Model number	P3 adapter	H31	H510	H520	H540
3M	Airstream AH1, AH4, AH7, HT-701, HT-702, HT-705, HT-707	AE	ML	ML	ML	L
3M	G500 Headgear	E	SML	SML	SML	SML
3M	Versaflo™ M-106, M-107, M-306, M-307	AF	ML	ML	ML	ML
3M	3M™ Speedglas™ Welding Helmet 9100 MP	AF	ML	ML	ML	ML
3M	G2000	K	SML	SML	SML	SML
3M	G22	E	SML	SML	SML	SML
3M	G3000	E	SML	SML	SML	SML
3M	G3501	E	SML	SML	SML	SML
3M	H-700	E	SML	ML	SML	L
Auboueix	Brennus	F	SML	SML	SML	SML
Auboueix	Fondelec	F	SML	SML	SML	SML
Auboueix	Iris	E	ML	ML	ML	ML
Auboueix	Iris 2	E	ML	ML	ML	ML
Auboueix	KARA	E	SML	SML	SML	ML
Grolls	Balance	E	ML	ML	ML	ML
Grolls	Balance AC	E	ML	ML	ML	ML
Grolls	Balance HD	N	SML	SML	SML	SML
Grolls	Robust	E	SML	SML	SML	SML
Centurion	1100/ARCO type 2	H	SML	SML	SML	ML
Centurion	1125/ARCO plus	H	SML	SML	SML	SML
Centurion	1540/ARCO	A	ML	ML	ML	ML
Centurion	Concept	E	SML	SML	SML	SML
JSP	EVOLITE	E	L	ML	ML	L
JSP	MK6R/MK7R	E	L	SML	SML	L
JSP	MK8	E	L	L	ML	L
Kemira	Top Cap	A	SML	SML	SML	SML
LAS	LP2002	E	SML	SML	SML	SML
LAS	LP2006	E	SML	SML	SML	SML
MSA	Super V-Gard II	E	SML	SML	SML	SML
MSA	V-Gard	E	SML	SML	SML	SML
Petzl	Vertex	E	SML	SML	SML	SML
Protector / Scott	Style 300	E	SML	SML	SML	SML
Protector / Scott	Style 600	E	SML	SML	SML	SML
Protector / Scott	Tuffmaster II	E, G	ML	ML	ML	ML
Römer	Bravo 2 Nomaz	B	SML	SML	SML	SML
Römer	Marcus Top Atlas Nomaz	B	SML	SML	SML	SML
Römer	N2 Atlas Nomaz	BB	SML	SML	SML	SML
Römer	Profi Expo	E	SML	SML	SML	SML
Römer	Profia Nomaz	E	SML	SML	SML	SML
Römer	Top Expo Atlas	B	SML	SML	SML	SML
Schubert	BEN	BB	SML	SML	SML	SML
Schubert	BER S	E	SML	SML	SML	SML
Schubert	BER80/WPC80	EA	SML	SML	SML	SML
Schubert	BOP R	B	SML	SML	SML	SML
Schubert	PIONIER	B	SML	SML	SML	SML
Schubert	SH 91/WPL 91	EB	SML	SML	SML	SML
Schubert	SW1	EB	ML	ML	ML	ML
Sofop Taliaplast	Oceanic	E	ML	ML	ML	ML
Sofop Taliaplast	Opus	E	ML	ML	ML	ML
UVEX	Airwing	E	SML	SML	SML	SML
Voss	Inap 88	E	SML	SML	SML	SML
Voss	Inap Master	E	ML	ML	ML	ML
Voss	Inap PCG	G	ML	ML	ML	ML
Voss	Inap Star	E	ML	ML	ML	ML

i.e. for what head size the combination of helmet and hearing protector is approved

3M™ PELTOR™ X series certified helmet attachment options

Helmet brand	Model number	P5 adapter	X1P5, X1P5-OR	X2P5	X3P5	X4P5, X4P5-OR	X5P5
3M	G500 Headgear	E	SML	SML	SML	SML	SML
3M	G22	E	SML	SML	ML	SML	L
3M	G2000	K	SML	SML	SML	SML	ML
3M	G3000 (Basic Set)	E	SML	SML	SML	SML	ML
3M	G3501	E	SML	SML	ML	SML	L
3M	H700	E	SML	L	L	SML	L
3M	Speedglas Welding Helmet 9100 MP	AF*	SML	ML	ML	SML	L
3M	Versaflo M-106 and M-107	AF*	ML	ML	ML	ML	ML
3M	Versaflo M-306 and M-307	AF*	SML	ML	ML	SML	L
Arco	Arco Champion	H*	L	L	L	L	L
Arco	Arco Champion Plus	H*	L	L	L	L	L
Aubouix	Iris 2	E	L	L	L	L	L
Aubouix/Seybol	Kara	E	SML	SML	SML	SML	ML
Centurion	1100 (H fitting)	H*	L	L	L	L	L
Centurion	1125 (H fitting)	H*	L	L	L	L	L
Centurion	Concept (E fitting)	E	L	L	L	L	L
Centurion	Concept (H fitting)	H*	L	L	L	L	L
Centurion	Vulcan	H*	L	L	L	L	L
Delta Plus	Zircon	E	SML	L	L	SML	L
Grolls	Balance AC	E	L	L	L	L	L
MSA	V-Gard 500	E	SML	SML	SML	SML	SML
PETZL	Vertex Best, Vent and ST	E	ML	ML	ML	ML	L
Protector/Scott	Style 300	E	ML	ML	ML	ML	ML
Protector/Scott	Style 600	E	SML	SML	SML	SML	ML
Shuberth	EuroGuard	E	SML	L	L	SML	L

S = small size, M = medium, L = large size*

* i.e. for what head size the combination of helmet and hearing protector is approved







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