

3M Occupational Health & Environmental Safety Division  
Hearing Protection Products



Take your safety personally



Safety  
& comfort  
for you

**3M**

# 3M™ Passive Hearing



## E-A-Rfit™ Validation System

**Stop guessing what protection levels your Workers are really getting from their earplugs**

**Start knowing each worker's personal protection level and Validate that they are getting the protection they need.**



Ear canal shapes are different.

Fitting methods are different.

That means protection levels are different.

So who's getting what protection? Is it enough?

· Validate personalised protection levels for each worker

· Quick, easy and affordable testing process

· Compatible with a variety of E-A-R™ hearing protector

### 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.



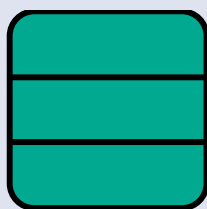
## Optime™ Alert System

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.

3M has also developed a simple sound level indicator that complements the Optime™ Alert System by establishing which colour code you need to follow.

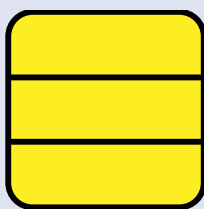


**\*RNR = Recommended Noise Rating**



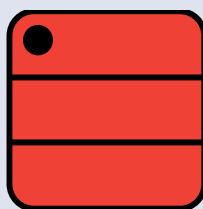
**RNR\* < 85dB(A)**

You do not have to wear hearing protection, but make it available to your workers.



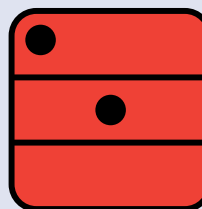
**83 dB(A) - 93 dB(A)**

You must assume you are above the permitted exposure level, hearing protection is compulsory.



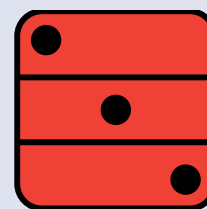
**87 dB(A) - 98 dB(A)**

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



**94dB - 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.



# Optime™ Alert System by Product



## GREEN OPTIME™ ALERT SYSTEM

**RNR\* < 85dB(A)**

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

Ultrafit 14 Earplugs - SNR 14dB  
E-A-Rflex 14 Earplugs - SNR 14dB



## YELLOW OPTIME™ ALERT SYSTEM

**83 dB(A) - 93 dB(A)**

You are above the permitted exposure level, hearing protection is compulsory.

E-A-Rsoft 21 Earplugs - SNR 21dB  
Ultrafit 20 Earplugs - SNR 20dB  
ClearE-A-R 20 Earplugs - SNR 20dB  
Tracer 20 Earplugs - SNR 20dB  
Ultratech Earplugs - SNR 21dB  
1281/1291 Earplugs - SNR 21dB  
E-A-Rflex 20 Earplugs - SNR 20dB  
E-A-Rband Earplugs - SNR 21dB  
Caboflex Earplugs - SNR 21dB



## RED 1 OPTIME™ ALERT SYSTEM

**87 dB(A) - 98 dB(A)**

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

Classic Earplugs- SNR 28dB  
Express Earplugs- SNR 28dB  
1261/1271 Earplugs - SNR 25dB  
E-A-Rcaps Earplugs - SNR 23dB  
Flexicap Earplugs - SNR 23dB  
Pulsar Earplugs - SNR 23dB  
Swerve Earplugs - SNR 24dB  
1310 Earplugs - SNR 26dB  
Reflex Earplugs - SNR 26dB  
Ultra 9000 Earmuffs - SNR 22dB  
Model 5000 Earmuffs - SNR 27dB  
Optime I Earmuff - SNR 26/27/28dB (depending on the version)  
Bulls'eye I Earmuff - SNR 27dB  
H 31 Earmuff - SNR 27/28 dB (depending on the version)



## RED 2 OPTIME™ ALERT SYSTEM

**94dB - 105dB(A)**

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

Classic Corded Earplugs - SNR 29dB  
Pro-Seals Earplugs - SNR 29dB  
Torque Earplugs - SNR 32dB  
Tri-Flange Earplugs - SNR 29dB  
Tracers Earplugs - SNR 32dB  
Ultrafit Earplugs - SNR 32dB  
Optime II Earmuff - SNR 30/31dB (depending on the version)  
PTL Earmuff - SNR 29/31dB Depending On The Version  
Bulls'eye II Earmuff - SNR 31dB



## RED 3 OPTIME™ ALERT SYSTEM

**95 dB(A) - 110 dB(A)**

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

Classic Soft Earplugs - SNR 36dB  
Superfit 33 Earplugs - SNR 33dB  
Superfit 36 Earplugs - SNR 36dB  
1120/1130 Earplugs - SNR 34dB  
E-A-Rsoft Neons Earplugs - SNR 36dB  
E-A-Rsoft Blasts Earplugs - SNR 36dB  
E-A-Rsoft Metal Detectable Earplugs - SNR 36dB  
Solar Earplugs - SNR 36dB  
1100/1110 Earplugs - SNR 37dB  
E-A-Rsoft Fx Earplugs - SNR 39dB  
No-Touch Earplugs - SNR 35dB  
Push-Ins Earplugs - SNR 38dB  
Ultrafit X Earplugs - SNR 35dB  
Optime III Earmuff - SNR 34/35 dB (depending on the version)  
Bulls'eye III Earmuff - SNR 35dB



### 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)

# 3M™ Passive Hearing



## Roll Down PU Earplugs

Our Roll Down Earplugs are made from expandable Polyurethane (PU) foam, which provides great comfort and good protection. The one size fits most ear canals. Once inserted in the ear, the foam plugs expand to provide a snug and secure custom fit. E-A-R™ and 3M™ provide a wide range of disposable roll down PU earplugs to choose from and to find the best solution for your individual needs..

### Features and Benefits:

#### Comfortable

- + Soft hypoallergenic foam material for lower pressure inside the ear
- + Smooth, dirt resistant surface for better hygiene, durability and comfort

#### Convenient

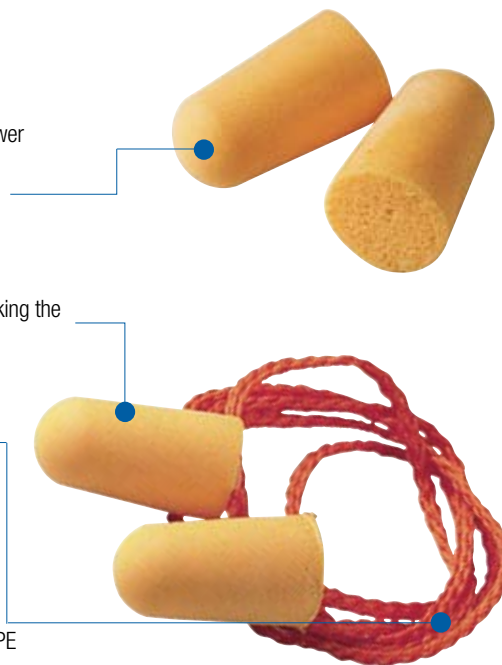
- + Tapered design fits most ear canals making the plugs easier to use
- + One size only
- + Dispenser available (1100)
- + Polyester cord (1110) helps prevent hearing loss

#### Effective

- + High SNR of 37dB

#### Compatible with

- + Designed to be compatible with other PPE



### 3M™ 1100/1110 Disposable Earplugs

Available corded, uncorded and with dispenser

### Other 3M™ Disposable Earplugs

#### 3M™ 1120/1130

Especially designed for smaller ear canals  
Available corded, uncorded and with dispenser  
SNR 34dB



#### 3M™ Solar™

Colourful earplugs  
Available corded, uncorded and with dispenser  
SNR : 36dB



#### E-A-Rsoft™ Yellow Neons and Blasts

The E-A-R™ standard PU earplugs  
Available corded (Yellow Neons), uncorded and with dispenser. Compatible with E-A-Rfit™ validation system  
SNR : 36dB



#### E-A-Rsoft™ 21

The low attenuation disposable earplugs  
Only available uncorded.  
SNR : 21dB



#### E-A-Rsoft™ FX

The highest attenuation  
Available corded and uncorded.  
SNR : 39dB



#### E-A-Rsoft™ Metal Detectable

The traceable disposable earplugs with cord.  
Compatible with E-A-Rfit™ validation system  
SNR : 36dB



### 1100/1110

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

### 3M 1100/1120 Dispenser



### One-Touch™ Dispenser







# E-A-R™ Classic™ Earplugs

Classic™ earplugs are made from a soft energy absorbing polymer foam which provides excellent hearing protection and all day comfort. The famous Classic™ earplugs are roll down plugs and are available in multiple options to accomodate different wearer needs.

## Features and Benefits:

### Comfortable

- + Soft energy absorbing foam offers a low equilibrium pressure
- + Absorption-resistant, helping to reduce moving and shifting problems when using in moist conditions
- + Design to fit and protect without irritation

### Effective

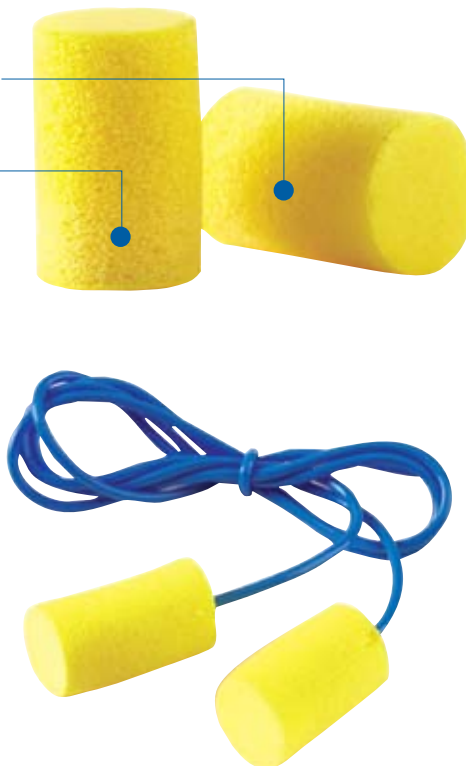
- + Tested and proven to be flame resistant
- + Exposed cell surface texture resists movement and helps maintaining an effective seal

### Convenient

- + Packed in a handy and resealable Pillowpack
- + Compatible with E-A-Rfit™ validation system to check Personal Attenuation Ratings

### Compatible with

- + Designed to be compatible with other PPE



## CLASSIC™

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

## E-A-R™ Classic.

Available corded, uncorded and with dispenser  
SNR : 28dB

## Other E-A-R™ Classic Products

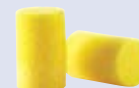
### E-A-R™ Classic™ Soft

Softer Classic earplugs for increased comfort  
Available corded, uncorded and with dispenser  
SNR : 36dB



### E-A-R™ Classic™ Small

Reduced diameter for smaller ear canals  
Only available uncorded  
SNR : 28dB



### E-A-R™ Superfit™ 33/36

With exclusive fitting ring  
Available uncorded and with dispenser  
(only Superfit™ 33)  
SNR : 33/36dB



## One-Touch™ Dispenser



# 3M™ Passive Hearing



## 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..

### Features and Benefits:

#### Comfortable

- + Unique pod design allowing the foam to compress easily
- + The plug slides gently into the ear and expands slowly
- + Patented E-A-Rform foam tip shaped and sized to mold comfortably fitting virtually every size ear canal

#### Convenient

- + Available corded or uncorded
- + No roll down required
- + Washable and reusable
- + The insertion stem eliminates the need to touch the tip : no need to clean your hands

#### Compatible with

- + Designed to be compatible with other PPE



#### E-A-R™ Express™

Available corded, uncorded  
SNR 28dB

#### Other Pod Plugs

#### E-A-R™ Pro Seals™

The pod earplugs with flexible stem  
Available corded and uncorded  
SNR : 29dB



#### 3M™ Torque™

The tough pod plugs  
Available corded and uncorded  
SNR : 32dB



#### 3M™ No-Touch™

The colourful pod earplugs  
Available corded and uncorded  
SNR : 35dB



#### E-A-R™ Push-Ins™

The disposable pod ear plugs with high attenuation  
Available corded and uncorded.  
Compatible with E-A-Rfit™ validation system  
SNR : 38dB



#### EXPRESS™

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



# 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 patented, pre-moulded, triple flanged earplugs. Available in a variety of style and protection levels.

## Features and Benefits:

### Comfortable

- + Unique and patented tri-flange design for a perfect fit and comfort
- + Easy to fit in the ear for a continuous and comfortable protection

### Effective

- + High attenuation (SNR : 32dB)

### Convenient

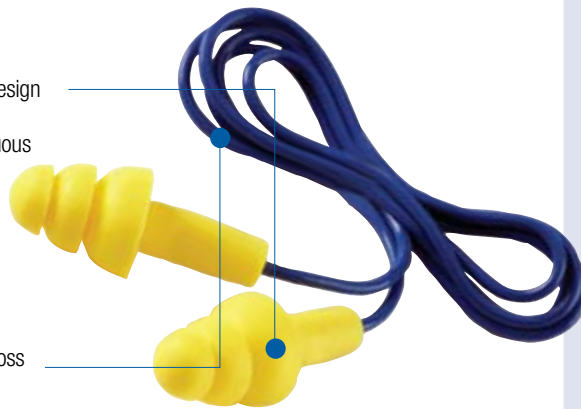
- + Available with a cord to prevent loss
- + Washable and reusable
- + Compatible with E-A-Rfit™ validation system to check Personal Attenuation Ratings

### Versatile

- + Different versions to various use : traceable, high and low attenuation versions

### Compatible with

- + Designed to be compatible with all types of PPE



## ULTRAFIT™

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 Ultrafit

SNR 32dB

## Other pre-moulded ear plugs

### E-A-R™ Ultrafit™ 14/20

The low attenuation E-A-R™ Ultrafit™ versions  
SNR : 14/20dB



### ClearE-A-R 20™

The "nearly" invisible earplugs  
SNR : 20dB



### 3M™ 1261/1271

The pre-moulded earplug with convenient storage case  
Available corded and uncorded  
SNR : 25dB



### 3M™ 1281/1291

The softest pre-moulded earplugs  
Available corded and uncorded  
SNR : 21dB



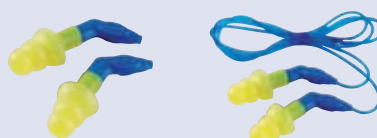
### 3M™ Tri-Flange™

Comfort and design  
Available with vinyl or cotton cord  
SNR : 29dB



### E-A-R™ Ultrafit X™

The high attenuation pre-moulded earplugs  
Available corded and uncorded.  
SNR : 38dB



### E-A-R™ Tracers™ and Tracers™ 20

Metal detectable version  
SNR : 32dB (20dB for Tracers™ 20)



# 3M™ Passive Hearing



## 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.

### Features and Benefits:

#### Comfortable

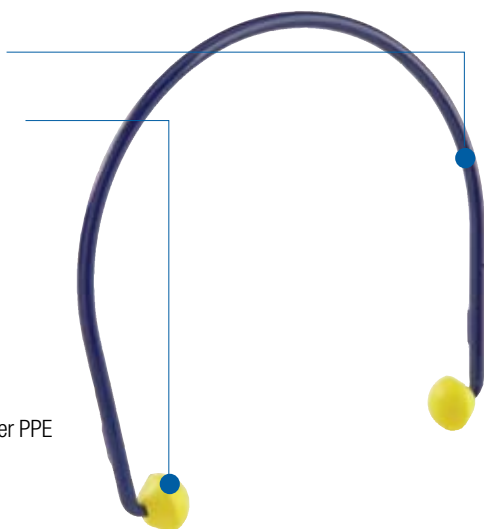
- + Extremely light
- + Very low pressure into the ear
- + Pod plugs gently slides into the ear with no deep insertion

#### Convenient

- + Easy to use
- + Ideal for people moving in and out
- + Replacement pods available

#### Compatible with

- + Designed to be compatible with other PPE



#### E-A-RCAPS™

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

#### 3M™ 1310

The high flexibility band  
Replacement pods available  
SNR : 26dB



#### E-A-R™ Reflex™

The multi-position banded earplugs with conical tips  
Replacement pods available  
SNR : 26dB



#### E-A-Rcaps™

Replacement pods available  
SNR 23dB

#### Other banded earplugs

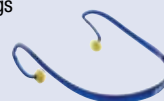
#### E-A-Rflex™ 14/20

The low attenuation banded earplugs  
SNR : 14/20dB



#### E-A-Rband™

The ergonomic banded earplugs  
Replacement pods available  
SNR : 21dB



#### E-A-R™ Caboflex™

The banded earplugs with durable conical shaped insert  
Replacement pods available  
SNR : 21dB



#### E-A-R™ Flexicap™

The multi-position banded earplugs  
Replacement pods available  
SNR : 21dB



#### 3M™ Pulsar™

Design and ergonomics  
SNR : 23dB



#### E-A-R™ Swerve™

The high-end banded earplugs with adjustable band  
Replacement pods available.  
SNR : 26dB







# Peltor™ Optime™ I Earmuffs

Optime™ I 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. Optime™ I 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.

## Features and Benefits:

### Comfortable

- + Extremely low profile and light (180g) to make it easy to team with other equipment
- + Generous inside depth to help the ears rest comfortably
- + Soft and wide sealing rings filled with a unique combination of foam and liquid to offer optimum sealing and low pressure



### Effective

- + High attenuation despite lightness and low profile : 27dB SNR
- + Unique band design, stainless steel wire for constant pressure over long periods of use

### Versatile

- + Various versions available to fit any situation : foldable, neckband, high visibility, helmet mounted versions

**Peltor™ Optime™ I Headband**  
SNR : 27dB

### Accessories

Hygiene kits are available for each earmuff version

## Other Peltor™ Optime™ I Ear Muffs



**Peltor™ Optime™ I Neckband**  
No headband for a complete compatibility with other head worn PPE equipment SNR : 26dB



**Peltor™ Optime™ I Folding Headband**  
Easy-to-store solution  
SNR : 28dB



**Peltor™ Optime™ I Hi-Viz**  
For workers in need of extra visibility, for example road workers and ground handling staff at airports. Available in all versions.  
SNR : 26dB



**Peltor™ Optime™ I Helmet attachment**  
Various versions for different safety helmets  
SNR : 26dB

# 3M™ Passive Hearing



## Peltor™ Optime™ II Earmuffs

The Optime™ II 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 foil.

Optime™ II is a suitable choice for typical environments with substantial

industrial noise or construction machinery, airports and agricultural work.

The product is also available in di-electric 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.

### Features and Benefits:

#### Comfortable

- + Generous inside depth help the ears to rest comfortably
- + Soft and wide sealing rings filled with a unique combination of foam and liquid to offer optimum sealing and low pressure
- + Sealing rings with ventilation channels and covered with soft, patterned hygienic foil

#### Effective

- + High attenuation despite lightness and low profile : 31dB SNR
- + Unique band design, stainless steel wire for constant pressure over long periods of use

#### Versatile

- + Various versions available to fit any situation : foldable, neckband, high visibility, helmet mounted versions



#### Peltor™ Optime™ II Headband

SNR : 31 dB

#### Accessories

Hygiene kits are available for each earmuff version

#### Other Peltor™ Optime™ II Ear Muffs



#### Peltor™ Optime™ II Neckband

No headband for a complete compatibility with other head worn PPE equipment.  
SNR : 31dB



#### Peltor™ Optime™ II Folding Headband

Easy-to-store solution  
SNR : 31dB



#### Peltor™ Optime™ II Hi-Viz

For workers in need of extra visibility, for example road workers and ground handling staff. Available in all versions.  
SNR : 30dB



#### Peltor™ Optime™ PTL (Push To Listen)

Optime™ Earmuff with a manual listening function. Just push the button and you reduce attenuation to listen.  
SNR : 31dB  
Also available in Hi-Viz and Helmet mounted version (SNR : 29dB)

#### Peltor™ Optime™ II Di-electric

A version with no visible metal parts. Available in all versions.  
SNR : 31dB



#### Peltor™ Optime™ II Helmet attachment

Various versions for different safety helmets  
SNR : 30dB



# Peltor™ Optime™ III Earmuffs

The Optime™ III 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 Optime™ III stands for effective protection and highest comfort for the wearer. The product is also available in di-electric 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.

## Features and Benefits:

### Comfortable

- + Generous inside depth help the ears to rest comfortably
- + Broad sealing rings
- + Sealing rings filled with soft plastic foam for the best fit and low contact pressure

### Effective

- + Very high attenuation : SNR of 35dB
- + Unique band design, stainless steel wire for constant pressure over long periods of use
- + Double casing that minimises resonance cup casing resulting in maximum high-frequency attenuation.

### Versatile

- + Various versions available to fit any situation : foldable, neckband, high visibility, helmet mounted versions



**Peltor™ Optime™ III Headband**  
SNR : 35dB

### Accessories

Hygiene kits are available for each earmuff version

## Other Peltor™ Optime™ III Ear Muffs



**Peltor™ Optime™ III Neckband**  
No headband for a complete compatibility with other head worn PPE equipment  
SNR : 35dB



**Peltor™ Optime™ III Hi-Viz**  
For workers in need of extra visibility, for example road workers and ground handling staff at airports. Available in all versions.  
SNR : 34dB



**Peltor™ Optime™ III Helmet attachment**  
Various versions for different safety helmets.  
SNR : 34dB