

# 3M™ PELTOR™ Optime™ III Earmuffs

## Technical Data Sheet

### Description

The PELTOR™ Optime™ III earmuffs are available in headband, neckband, foldable or helmet mounted version. These products are designed to provide a high level of attenuation that meets the needs of many industrial applications where high levels of noise may be encountered.

When correctly selected and worn these products help reduce exposure to hazardous levels of noise and loud sounds.

The helmet mounted version is designed to fit a wide range of industrial safety helmets.

### Key Features

- Dual cup protection
- Unique low profile headband design helps maintain constant pressure thus providing confidence in protection
- Large space inside cup helps reduce moisture and heat build-up
- Soft wide cushions helps reduce pressure around the ears and improves comfort and wearability
- Easy to replace cushions and inserts helps keep them hygienically clean
- 3M™ PELTOR™ Optime™ III Earmuffs feature a double cup design that helps improve attenuation at lower frequencies
- Easy to understand attenuation symbol to help ensure correct product selection
- Helmet mounted products now come with two blades in the box to accommodate common helmet slots, and Scott/3M accessories such as visors.

### Applications

The Peltor™ Optime III earmuffs are ideal for protection against noise arising from a wide range of applications in the workplace and leisure activity.

Examples of typical applications include:

- Airports
- Automotive
- Cement manufacture Construction
- Chemical & pharmaceutical manufacture
- Construction
- Heavy engineering
- Metal processing
- Printing
- Textile manufacture
- Woodworking



### Materials

The following materials are used in the manufacture of this product.

#### Optime III Headband/Neckband/Foldable version

| Component                      | Material                          |
|--------------------------------|-----------------------------------|
| Headband/Neckband/<br>Foldable | Stainless Steel Wire, PVC, Acetal |
| Headband padding               | PVC                               |
| Cups                           | ABS                               |
| Inserts                        | PU Foam                           |
| Cushions and Cushion<br>Covers | PU Foam and PVC                   |

#### Optime III Helmet mounted version

| Component                      | Material                               |
|--------------------------------|--|
| Helmet attachment arm          | Stainless Steel Wire, Acetal, Polyamid |
| Cups                           | ABS                                    |
| Inserts                        | PU Foam                                |
| Cushions and Cushion<br>Covers | PU Foam and PVC                        |

### Standards

The Optime™ III earmuffs have been tested in accordance with AS/NZS 1270:2002 and have been tested by an accredited laboratory in accordance with the requirements stipulated in AS/NZS 1270.

## Attenuation Data

### Optime III H540A Headband & H540AHV Hi Viz Headband

| Class 5            | SLC <sub>80</sub> Value is 33 |      |      |      |      |      |      |
|--------------------|-------------------------------|------|------|------|------|------|------|
| Frequency (HZ)     | 125                           | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| Means              | 17.9                          | 23.4 | 35.1 | 40.6 | 35.1 | 41.8 | 40.4 |
| Standard Deviation | 3.2                           | 2.6  | 2.6  | 4.5  | 3.5  | 3.4  | 3.7  |
| Mean - SD          | 14.7                          | 20.8 | 32.5 | 36.1 | 31.6 | 38.4 | 36.7 |

### Optime III H540B Neckband

| Class 5            | SLC <sub>80</sub> Value is 34 |      |      |      |      |      |      |
|--------------------|-------------------------------|------|------|------|------|------|------|
| Frequency (HZ)     | 125                           | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| Means              | 17.0                          | 24.0 | 35.2 | 40.1 | 36.4 | 41.1 | 38.6 |
| Standard Deviation | 2.7                           | 3.4  | 3.3  | 3.2  | 2.9  | 2.9  | 3.7  |
| Mean - SD          | 14.3                          | 20.6 | 31.9 | 36.9 | 33.5 | 38.2 | 34.9 |

### Optime III Helmet Attach Earmuff H540P3GS/E

| Class 5            | SLC <sub>80</sub> Value is 30 dB |      |      |      |      |      |      |
|--------------------|----------------------------------|------|------|------|------|------|------|
| Frequency (HZ)     | 125                              | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| Means              | 20.9                             | 22.9 | 32.9 | 34.2 | 34.2 | 39.2 | 36.9 |
| Standard Deviation | 4.7                              | 4.1  | 4.7  | 4.4  | 5.4  | 5.9  | 5.1  |
| Mean - SD          | 16.2                             | 18.8 | 28.2 | 29.8 | 28.8 | 33.3 | 31.2 |

Hearing protector class 5 tested to AS/NZS 1270. When selected, used and maintained as specified in AS/NZS 1269, this protector may be used in noise up to 110 dB(A) assuming an 85dB(A) criterion.

A lower criterion may require a higher protector class.

Mean = Mean attenuation value derived from testing in accordance with AS/NZS 1270:2002 SD = Standard Deviation derived from testing in accordance with AS/NZS 1270:2002 Mean - SD = Mean attenuation value minus Standard Deviation SLC(80) = Single number rating commonly used in Australia and New Zealand to compare acoustic performance of hearing protectors. The subscript '80' indicates that in well managed hearing protector programs, the protection provided is expected to equal or exceed the SLC(80) in 80% of protector-wearer noise spectrum combinations. Class = A simplified process for selecting hearing protectors based on the wearers 8-hour equivalent continuous A-weighted sound pressure level.

## SLC<sub>80</sub> and The Class System

SLC<sub>80</sub> is the rating number used in Australia and New Zealand. Users are advised to only use SLC<sub>80</sub> when selecting their earmuffs or earplugs.

Depending on the SLC rating, a Class is assigned:

- A Class 1 protector may be used up to 90dB TWA
- A Class 2 protector to 95dB TWA
- A Class 3 protector to 100dB TWA
- A Class 4 protector to 105dB TWA
- A Class 5 protector to 110dB TWA

| Symbol | Definition             | Where Used              |
|--------|------------------------|-------------------------|
| SLC80  | Sound Level Conversion | Australia / New Zealand |
| NRR    | Noise Reduction Rating | United States           |
| SNR    | Single Number Rating   | European Union          |

## Fitting Instructions

- Follow the fitting instructions on the product package
- Remove hair or any obstruction from underneath the cushion.
- If spectacles are worn, cushions must be soft and subtle to ensure seal. If safety spectacles are worn in combination a thin side arm spectacle is preferable.

## Warning

- These hearing protectors help reduce exposure to hazardous noise and other loud sounds. Misuse or failure to wear hearing protectors at all times that you are exposed to hazardous noise may result in hearing loss or injury.
- The noise reduction may be lower when safety spectacles, goggles or respirator straps are worn between the sealing surface of the earmuff cushions and the sides of the wearer's head. For best noise reduction, select safety spectacles or goggles that have thin, flat temples or straps which will minimize interference with the seal of the earmuff cushions. Pull long hair back to the extent possible and remove other items that may degrade the earmuff seal such as pencils, hats, jewelry or earbuds.
- Do not bend or reshape the headband, neckband or helmet attachment and ensure there is adequate force to hold the earmuffs firmly in place.

## Maintenance/cleaning

- Hearing protectors should be inspected prior to use for damage or deterioration. Damaged or worn parts should be replaced prior to use.
- Wash outside of earmuffs only. Use mild soap and water. Do not immerse in water. If the hearing protector gets wet from rain or sweat, turn the earmuffs outwards, remove the ear cushions and foam liners, and allow to dry before reassembly.
- Do not store the earmuffs in temperatures above +55°C (130°F), for example behind a windshield or window.
- Inspect earmuffs regularly for cracked or worn parts, especially the cushions. Replace as needed.
- 3M recommends replacing the hygiene kit every six months to maintain acceptable noise reduction, hygiene and comfort. In hot and humid environments more frequent changes may be required to maintain acceptable hygiene.

## Storage

- Store the product in a clean and dry area before and after use.
- Always store the product in the original packaging and away from any sources of direct heat or sunlight, dust and damaging chemicals.
- Storage temperature range: -20 °C (-4°F) to 55 °C (131°F).
- Relative humidity: <90%.
- For headband and neckband versions: make sure that no force is applied to the headband or neckband and that the cushions are not compressed.
- Helmet attachment version: ensure the earmuffs are in the storage position and that the cushions are not compressed.

## Disposal

If the product is to be disposed of, it should be disassembled and disposed of as solid waste. Please see local authority regulations for disposal advice and locations.

## Ordering Information

| 3M Code     | Model #    | Description   |
|-------------|------------|---|
| 70071730587 | H540P3GS/E | H540P3GS/E PELTOR Optime III Helmet Attach Earmuff        |
| 70071730595 | H540B      | H540B PELTOR Optime III Neckband Format Earmuff           |
| 70071730603 | H540A      | H540A PELTOR Optime III Headband Format Earmuff           |
| 70071730629 | H540AHV    | H540A HV PELTOR Optime III Hi-Viz Headband Format Earmuff |
| XH001659362 | HY54       | HY54 Replacement Hygiene Kit for Optime III Series        |

## Important Notice

To the extent permitted by law, 3M shall not be liable for any loss or damage including any loss of business, loss of profits, or for any indirect, special, incidental or consequential loss or damage arising from reliance upon any information herein provided by 3M. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence.



**3M Australia Pty Ltd**  
**Personal Safety Division**  
Bldg A, 1 Rivett Road  
North Ryde NSW 2113  
TechAssist Helpline: 1800 024 464  
Customer Service: 1300 363 565  
Email: techassist@mmm.com  
Web: www.3M.com/au/ppesafety

**3M New Zealand Ltd**  
**Personal Safety Division**  
94 Apollo Drive, Rosedale  
Auckland 0632  
TechAssist Helpline: 0800 364 357  
Customer Service: 0800 252 627  
Email: techassist@mmm.com  
Web: www.3M.com/nz/ppesafety

PSD products are occupational use only.  
3M and PELTOR are trademarks of 3M Company.  
Please recycle. Printed in Australia.  
© 3M 2021. All rights reserved.  
AV011497748