

# 3M™ E-A-R™ Taperfit™ 2 Disposable Foam Earplugs

## Technical Data Sheet



## Product description

3M™ E-A-R™ Taperfit™ 2 foam earplugs feature smooth foam that expands in the ear canal to help provide comfortable hearing protection.

## Features

- Complies with Australian/New Zealand Standard AS/NZS 1270:2002
- Soft polyurethane foam earplugs for all day comfort
- Compatible with E-A-Rfit™ Dual Ear Validation System
- Multiple size earplug offering (regular and large) help fit a broad range of ear canal sizes
- Available in corded and uncorded
- Poly bag keeps each pair of earplugs clean before use
- SLC<sub>80</sub> 26dB (Class 5)

## Applications

The E-A-R™ Taperfit™ 2 earplugs are ideal for a wide range of industrial workplace and leisure environments. Examples of typical applications include:

- Automotive
- Chemical & pharmaceutical manufacture
- Construction
- Heavy engineering
- Metal industry
- Textile manufacture
- Woodworking

## Standards

These hearing protectors have been produced to comply with the requirements of the Australian /New Zealand Standard AS/NZS 1270:2002.



## Materials

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

Component	Material
Earplugs	Polyurethane Foam
Cord	PVC

## Storage

- Store in area free of contamination
- Storage Temperature must be kept between -20°C and 40°C.
- Storage humidity <85% RH
- Product must be stored in original packaging.
- Regardless of storage history, always inspect hearing protectors before use and discard immediately if worn or damaged.

## Shelf-Life

- 3M™ hearing protector product lifetimes assume the above storage conditions are met.
- Product lifetime = 5 years from date of manufacture as printed on the product packaging.

NOTE: Some locations may have regulations that include specific product lifetime requirements for hearing protectors, which should take precedence over these 3M™ recommendations if they are more restrictive.

## Laboratory Attenuation Values

### Taperfit™ 2 Regular Uncorded

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean (dB)	23.6	24.6	28.2	29.7	34.9	44.2	45.3
SD (dB)	6.9	8.8	8.7	7.3	4.5	5.2	7.7
Mean - SD (dB)	16.7	15.8	19.5	22.4	30.4	39.0	37.6

SLC<sub>80</sub> 26dB (Class 5)

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 110dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protection class.

### Taperfit™ 2 Large Uncorded

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean (dB)	23.7	24.1	25.4	25.5	33.8	45.0	45.8
SD (dB)	4.2	4.3	4.3	3.8	2.9	4.9	5.0
Mean - SD (dB)	19.5	19.8	21.1	21.7	30.9	40.1	40.8

SLC<sub>80</sub> 26dB (Class 5)

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 110dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protection class.

### Taperfit™ 2 Large Corded

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean (dB)	26.2	26.2	28.2	27.9	35.5	46.6	46.9
SD (dB)	5.9	6.1	6.8	6.2	3.4	5.5	3.5
Mean - SD (dB)	20.3	20.1	21.4	21.7	32.1	41.1	43.4

SLC<sub>80</sub> 26dB (Class 5)

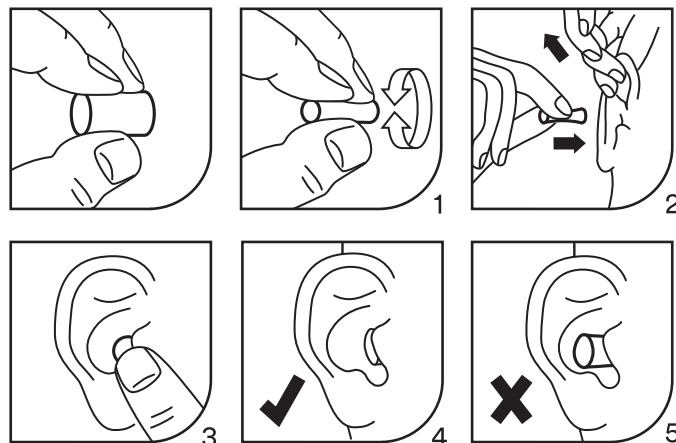
Hearing protector Class 5 tested to AS/NZS 1270. When selected, used and maintained as specified in AS/NZS 1269, this protector may be used in noise up to 110dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protection class.

## Key

<b>Mean</b>	Mean attenuation value derived from testing in accordance with AS/NZS 1270:2002.
<b>SD</b>	Standard Deviation derived from testing in accordance with AS/NZS 1270:2002.
<b>Mean-SD</b>	Mean attenuation value minus Standard Deviation <b>SLC<sub>80</sub></b> = 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 <sub>80</sub> in 80% of protector-wearer noise spectrum combinations.
<b>Class</b>	A simplified process for selecting hearing protectors based on the wearers 8-hour equivalent continuous A-weighted sound pressure level.

3M strongly recommends personal fit testing of hearing protectors. Research suggests that users may receive less noise reduction than indicated by the attenuation label value(s) on the packaging due to variation in fit, fitting skill, and motivation of the user. Refer to applicable regulations and guidance on how to adjust attenuation label value(s). In the absence of applicable regulations, it is recommended that the attenuation label value(s) be reduced to better estimate typical protection.

The effectiveness of a hearing protector reduces dramatically when the hearing protector does not fit properly, is incorrectly inserted or is not worn 100% of the time during ALL hazardous noise events. Removal of the hearing protector, even for brief moments, substantially reduces protection and greatly increases the risk of hearing damage.



## Fit Check

When ear plugs are correctly inserted your own voice should sound hollow and sounds around you should not sound as loud as before. Listen to steady loud sound with earplugs in both ears. Cover ears with tightly cupped hands. Noise should sound about the same whether or not ears are covered. Re-check the fit often during wear time. If earplugs become loose the actual protection obtained may be significantly reduced. To re-fit follow steps 1-5 above.

If you cannot obtain a good fit, try a different size or type of hearing protector. If you are unable to fit these earplugs correctly and comfortably in both ears, contact your safety officer or 3M for further advice.

## Hearing Protector Fit Testing the 3M™ E-A-Rfit™ Dual-Ear Validation System

The success of your hearing conservation program requires more than offering earplugs or earmuffs. Each worker needs to wear the most effective hearing protector for the environment and the correct fit for their unique anatomy. With 3M™ E-A-Rfit™ Dual-Ear Validation System, you can quickly identify how much protection each worker receives from their 3M hearing protectors.

## The Technology Behind 3M™ E-A-Rfit™

The 3M™ E-A-Rfit™ Dual-Ear Validation System is based on Field Microphone-In-Real Ear (F-MIRE) technology that measures the effectiveness of hearing protectors from inside a worker's ears, providing accurate, quantitative results. The tester wears a pair of modified 3M™ probed hearing protectors connected to a dual-element microphone. A loudspeaker is placed in front of the tester. When it emits a broadband noise, the dual-element microphone measures the signal in the ear canal and outside the ear plug. In less than five seconds, the difference between the two measurements is calculated and a Personal Attenuation Rating (PAR) is displayed.

## It Starts with PAR

The 3M™ E-A-Rfit™ Validation System puts the worker in the context of their noise environment and helps you understand their level of attenuation.

The results you get from the 3M™ E-A-Rfit™ is displayed as a PAR. The PAR is a numerical value that shows the reduction in sound level within the ear when a hearing protector is worn.

The resulting PAR, combined with the worker's exposure to noise, is used to determine if a worker is receiving appropriate protection from the noise hazard.

Knowing the PAR lets you identify workers who are inadequately protected, so you can provide real-time intervention and training.

## Key Benefits of the 3M™ E-A-Rfit™ Dual-Ear Validation System include:

- Tests both ears simultaneously in less than 5 seconds
- Science-based, quantitative testing
- Fast, clear, and accurate results
- Tests 7 frequencies 125Hz to 8000Hz
- 3M™ Earplug, earmuff and headset (comms) testing capability

Contact your 3M Personal Safety Specialist to find out more about our 3M™ E-A-Rfit™ Dual-Ear Validation System or for assistance in solving your complex or day-to-day hearing conservation challenges.

## Ordering Information

SAP ID	3M Order Code	Availability		Model #	Description
		AU	NZ		
7000002310	70071515228	●		312-1219	3M™ E-A-R™ TaperFit™ 2 Regular Uncorded Earplugs 312-1219, SLC <sub>80</sub> 26dB (Class 5), Poly Bag, 2000 Pairs/Case
7000002311	70071515236	●	●	312-1221	3M™ E-A-R™ TaperFit™ 2 Large Uncorded Earplugs 312-1221, SLC <sub>80</sub> 26dB (Class 5), Poly Bag, 200 Pairs/Box, 10 Boxes/Case, 2000 Pair/Case
7000002313	70071515251	●		312-1224	3M™ E-A-R™ TaperFit™ 2 Large Corded Earplugs 312-1224, SLC <sub>80</sub> 26dB (Class 5), Poly Bag, 2000 Pairs/Case
<b>3M™ E-A-Rfit™ Dual-Ear Validation System - Probe</b>					
7000002388	70071562808	●		393-2006-50	3M™ E-A-Rfit™ TaperFit™ 2 Probed Test Plugs, 393-2006-50, 50 ea/Case
7100230133	70071733557	●	●	393-2027-50	3M™ E-A-R™ TaperFit™ 2 Large Probed Test Plugs 393-2027-50, 50 Pair/Case

### 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 noise may result in hearing loss or injury. For proper use, see supervisor or User Instructions.

Always ensure the hearing protection device (HPD) is:

- Suitable for the application;
- Fitted correctly;
- Worn during all periods of exposure;
- Replaced when necessary.

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.



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