

# 3M™ E-A-R™ Flexible Fit Earplug HA Earplugs

## Technical datasheet



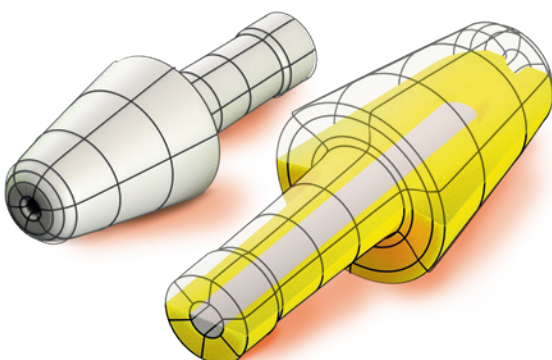
### Product description

The 3M™ E-A-R™ Flexible Fit HA Earplugs are designed for insertion into the ear canal to help reduce exposure to hazardous levels of noise and loud sound.

These earplugs are available in corded and uncorded version. When properly selected and worn according to the User Instructions, they may be used for protection against high noise environments, providing effective protection across all test frequencies.

### Key features

- ▶ Reusable, suggested use for up to 2 weeks when following wash and care instructions
- ▶ Foam encapsulated design means total earplug (stem and tip) are made with 3M patented washable foam
- ▶ Foam is resilient, predominantly closed cell TPE, which is water resistant
- ▶ The conical shape of the earplug along with the soft conforming foam helps provide a snug and comfortable fit
- ▶ No roll-down required helps keep the earplugs clean during fitting
- ▶ Firm yet flexible fitting stem and no foam roll-down means earplugs can be inserted and removed easily, even when wearing gloves
- ▶ Attenuation data available for both two hand insertion (SNR 35 dB) and one hand insertion (SNR 30 dB) - see full attenuation table
- ▶ Compatible with the 3M™ E-A-Rfit™ Dual-Ear Validation System
- ▶ 3M™ E-A-R™ Flexible Fit HA Earplug - corded (328-1001) and uncorded (328-1000)



### Standards and approvals

The 3M™ E-A-R™ Flexible Fit HA Earplugs are type approved against the European Regulation (EU) 2016/425 by either: BSI Group, The Netherlands B.V. Say Building, John M. Keynesplein 9, 1066 EP Amsterdam, The Netherlands, Notified Body No. 2797 and / or BSI Assurance UK Ltd, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP, UK, Notified Body No. 0086.

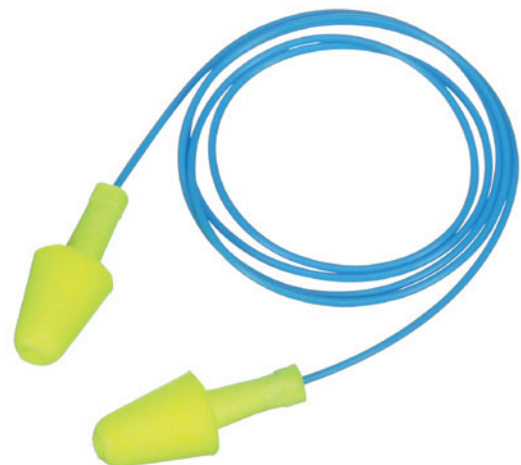
These products meet the requirement of the Harmonised European Standard EN 352-2:2002.

The applicable Certificate(s) and Declaration(s) of Conformity are available at [www.3M.com/Hearing/certs](http://www.3M.com/Hearing/certs).

### Materials

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

Earplugs	TPE
Stem	PA/PP
Cord	EVA/LDPE



## Attenuation values\*

Two hand insertion method								
f (Hz)	125	250	500	1000	2000	4000	8000	
Mf (dB)	31.0	29.9	34.1	34.7	38.3	40.4	43.5	
sf (dB)	3.7	4.2	3.3	3.8	3.1	3.4	2.6	
APVf (dB)	27.3	25.7	30.8	30.9	35.2	37.0	40.9	

SNR = 35dB, H = 36dB, M = 32dB, L = 29dB

One hand insertion method								
f (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	27.6	28.0	28.5	29.4	31.0	35.5	38.6	40.5
sf (dB)	5.6	5.3	5.5	5.0	4.5	4.8	4.1	5.6
APVf (dB)	22.0	22.7	23.0	24.4	26.5	30.7	34.5	34.9

SNR = 30dB, H = 31dB, M = 27dB, L = 25dB, APVf (dB) = Mf – sf (dB)

\* Results are for both corded and uncorded models.

### Key:

f = Test frequency

Mf = Mean attenuation value

sf = Standard deviation

APVf = Assumed Protection Value

H = High-frequency attenuation value (predicted noise level reduction for noise with LC – LA = -2dB)

M = Medium-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +2dB)

L = Low-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +10dB)

SNR = Single Number Rating (the value that is subtracted from the measured C-weighted sound pressure level, LC in order to estimate the effective A-weighted sound pressure level inside the ear).

## Important notice

The use of the 3M product described within this document assumes that the user has previous experience of this type of product and that it will be used by a competent professional. Before any use of this product it is recommended to complete some trials to validate the performance of the product within its expected application.

All information and specification details contained within this document are inherent to this specific 3M product and would not be applied to other products or environment. Any action or usage of this product made in violation of this document is at the risk of the user.

Compliance to the information and specification relative to the 3M product contained within this document does not exempt the user from compliance with additional guidelines (safety rules, procedures). Compliance to operational requirements especially in respect to the environment and usage of tools with this product must be observed. The 3M group (which cannot verify or control those elements) would not be held responsible for the consequences of any violation of these rules which remain external to its decision and control.

Warranty conditions for 3M products are determined with the sales contract documents and with the mandatory and applicable clause, excluding any other warranty or compensation.

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### Version 2

This version is the sole Technical Datasheet document applicable to the identified product(s) since its date of publication March 2021.

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