



SOUND OF confusion

THE ENVIRONMENTAL PROTECTION AGENCY'S NEW REQUIREMENT ON THE LABELING OF HEARING PROTECTION DEVICES MAY BE UNCLEAR

By Kyle W. Morrison, senior associate editor

For the first time in more than 30 years, the Environmental Protection Agency is set to update its regulations concerning hearing protection devices.

Under the Noise Control Act of 1972, EPA regulates the labeling of all hearing protection products sold on the basis of their effectiveness in reducing unwanted noise. Originally published in 1979, the agency's noise labeling standards for hearing protection devices (40 CFR Part 211) govern the testing methodologies for determining noise reduction ratings – how much any given device can reduce the transmission of sound from entering the ear canal – and how to label the devices.

A proposed rule published in August 2009 includes three separate labels covering the different types of hearing protectors and a range of NRRs instead of a single number. The new standards also will allow for devices incorporating technology developed over the past three decades, such as electronic noise cancellation, to be sold as hearing protection devices.

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The final rule was expected to be issued in December 2010, according to EPA's regulatory agenda. When *Safety+Health* magazine went to press, the rule had not been sent to the Office of Management and Budget for review, a process required before the rule can be published and that can take up to 90 days.

Photo: Honeywell Safety Products

When contacted in early June, an EPA spokesperson said the agency was working to finalize the rule as “expeditiously as possible” and expected to publish it “later this year.”

Confusion

Although many stakeholders are pleased that EPA is attempting to update the rule, some have expressed concern that the update may not make things clearer for the end user – and that could lead to problems.

“The more confusing it is, the more potential there is to not applying the correct solution to the problem,” said John Ratliff, chair of the noise committee at the Fairfax, VA-based American Industrial Hygiene Association.

Using a range of NRR numbers instead of one number could make it more complicated for safety professionals to choose the right device, he said.

“I think there was a tendency to look at the single-number NRR and believe it was accurate or precise,” said Elliott Berger, a scientist with 3M’s Occupational Health and Environmental Safety Division in Indianapolis. With the range provided by the new rating, he said, the low number on the scale is meant to represent what most users could achieve and the high number is meant to show what an experienced hearing protection user could achieve.

Testing methods

The problem, however, is that the ranges may not be a fair representation of the protection provided. This is a result of EPA’s testing method for determining NRRs for hearing protection devices.

In the proposed rule, the agency settled on Method A, a type of testing in which test subjects are informed and experienced in the use of hearing protection devices – they receive detailed instructions and demonstrations or have previous device use. EPA settled on this method because it is similar to an International Organization for Standardization test standard and both the military and OSHA require training in the use of hearing protectors.

Another method, known as Method B, is not being used by EPA for testing purposes. For this method, test subjects lack any prior knowledge or experience with hearing protection devices and are not provided with any guidance beyond what a manufacturer would normally include in written instructions.

“Method B is a better indicator of the real-world performance that is expected among potential users in both occupational and community settings,” the Westminster, CO-based

National Hearing Conservation Association said in its comments on the proposed rule.

3M’s comments on the rule noted that Method A testing that the company completed on some devices showed the NRR value on the low end of the range actually was higher than the single-digit NRRs currently found on labels. “This is moving in the wrong direction to achieve EPA’s goal of a more realistic rating and is misleading to those who purchase hearing protectors,” the company wrote.

More than the number

Berger speculated that some changes to EPA’s proposed rule may occur when the final rule is published – including the addition of a label for another type of hearing protection device or the altering of some wording on the labels – but said EPA likely would not change testing methods.

Regardless of the possible changes to the proposed rule, experts said safety professionals need to do their part and not simply rely on the NRR found on hearing protector labeling. Ratliff said employers must perform measurements to receive an accurate account of potential exposure to workers, and Berger stressed the need for proper training and fitting to ensure the devices are worn correctly.

“There just isn’t any lab-based number we can put on a product that can tell you what [hearing protection] an individual user will be achieving,” Berger said. “Better training programs and better motivational programs are really what are needed, along with individual fit testing of actual users, regardless of what EPA puts on a package.” ☺

Three label types

IN THE RULE PROPOSED in August 2009, the Environmental Protection Agency developed three primary label requirements that manufacturers must use to identify a hearing protector’s intended protection:

- **Passive devices** rely solely on their structure to block the transmission of sound into the ear canal without the use of electronic elements. These labels contain a single range.
- **Active devices** use electrical and structural elements, either alone or in combination, to reduce noise transmitted to the ear canal. These labels contain two ranges – with electronic activation and while passive.
- **Impulsive devices** provide a range of low-level passive hearing protection and protection in high-level environments (those that peak at greater than 140 dBA). These labels include two ranges – one for continuing passive noise and one for impulsive.

Source: Environmental Protection Agency

