

## The toxic truth about disposable earplugs

It is not disputed that earplugs protect from the noise exposure risks of industrial processes, shooting and motorsport and that the single-use disposable earplug remains the most common type of hearing protection in use today. In fact, the familiar 3M E-A-R Classic earplug is still commonly used in workplaces despite them being commercially introduced as the first foam disposable earplugs over 40 years ago.

Single-use disposable ear plugs remain popular because they're perceived to be inexpensive, they are easily fitted; they offer a variety of colours and fitting shapes and provide a good level of comfort and protection for most noise environments. However, the two unfortunate and negative aspects of single-use earplugs is that they are designed to be disposable, which contributes to waste production and landfill, and the hidden longer term costs is significantly more than other types of hearing protection.

Let us consider a typical industrial workplace in the UK. The company has 200 workers within a mandatory hearing protection zone and each employee has access to disposable earplugs and works 250 days per year. Each worker wears one disposable pair of earplugs for the morning shift and a new pair after lunch.

A 50% conformance of mandatory hearing protection will result in 50,000 pairs of earplugs being used annually and with a 100% conformance this figure rises to a staggering 100,000 pairs of used earplugs that are being sent to landfill. With 100% conformance of single use disposable earplugs this company alone will send more than half a million single non-biodegradable earplugs to landfill within a three year period; a problem that is further compounded when you also consider that most earplugs are packaged in a box or

provided in additional individual plastic wrappers.

***A single company with 200 employees wearing single use earplugs will dispose of more than half a million single earplugs in landfill within a three year period.***

However, we should not be too quick to dismiss the single use earplug. It is effective in what it does and the earplug manufacturers are listening to the environmental issues that they might create. Howard Leight now provide their earplugs individually wrapped in a biodegradable paper bags instead of the usual plastic poly-bag and Moldex has developed its foam earplugs using PU (polyurethane) which has less environmental impact than traditional earplugs manufactured from PVC (polyvinyl chloride), the latter of which is associated with release of toxic chemicals and health hazards following landfill and incinerator disposal. Earplug Dispensers have also been a positive leap forward in reducing packaging waste and provide a highly visible way of storing and dispensing earplugs easily, and hygienically, right into your hand, one pair at a time.

The bottom line, however, is that the earplug itself is unlikely to be biodegradable and the actual amount of landfill created by one employee wearing two pairs a day during their employment is staggering; times this by a number of employees and the number of business within the UK and the financial cost increases and the environmental impact becomes apparent. Fortunately there is a solution that reduces waste, saves money and retains the required level of protection.

Insta-Mold is a new concept in custom made hearing protection. Insta-Mold meets all UK and European safety requirements but the direct 'instant' fit avoids the higher costs of comparably lab-moulded custom hearing protection products and provides a low cost solution for business with minimal waste.

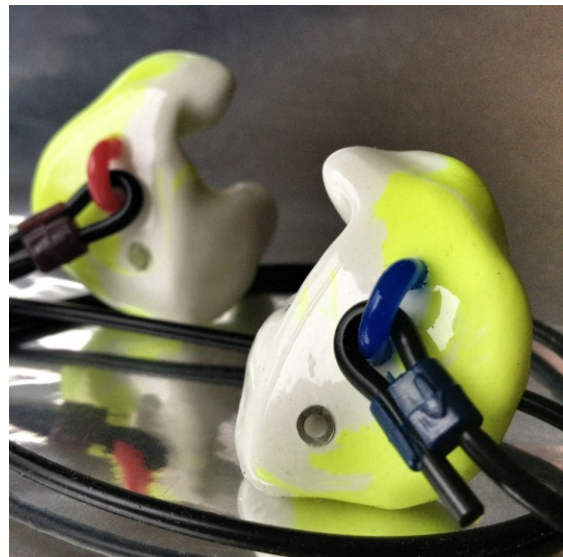
Let us re-visit our example company of 200 employees and fit them all with Insta-Mold earplugs at a total cost of £14,000 (based upon individual Insta-Mold product retail price of £69.99 inc. VAT). This is a significant upfront investment, but when you consider that the cost of providing the disposable earplugs (at just 11p per pair) for these 200 employees over the three year lifetime of Insta-Mold is £33,588 then the company achieves a cost saving of almost £20,000.

However further savings can be made. Insta-Mold has the additional benefit that these custom earplugs can be made 'instantly' and in-house by training individuals within your company. Suddenly, individual lab-moulded costs are avoided, your hearing protection programme become simple to manage and the costs are significantly reduced. In-house manufactured Insta-Mold can be made for less than £16 per employee which represents a cost saving over the same three year period of over £30,000 when compared against typical single use disposable earplugs.

***A single company with 200 employees wearing single use earplugs could save almost £20,000 in three years by switching to Insta-Mold custom hearing protection and could save over £30,000 in three years by self-manufacturing Insta-Mold in-house.***

But is Insta-Mold suitable? Insta-Mold was first developed in the US in 1971, has been widely used in the American markets for over 40 years and achieves full CE certification and safety requirements for use within the UK and European markets. Insta-Mold custom hearing protection offers businesses a solution that provides a comfortable individualised fit, a range of colours and stylish design. Insta-Mold has a tested single number rating (SNR) of between 21dB and 29dB and is made using hypo-allergenic medical grade silicones finished with a lacquer coating that provides a hygienic gloss finish. Each pair can be provided with acoustic filters and leash options, metal tracer options for the food and drinks industry, and are supplied with full fitting instructions and a storage pouch.

Although the single use disposable earplug is unlikely to disappear from UK workplaces, Insta-Mold offers a high quality, custom fitted CE certified hearing protection alternative that can achieve considerable cost savings for businesses and eliminate landfill waste. Insta-Mold is the ultimate personal, environmental and financial hearing protection solution for your workplace.



*The UK and Ireland distributor of Insta-Mold is Soundguard Acoustics Ltd and is run by Rob Shaddick, MSc, MIOA, a former NHS Audiologist and now Acoustic Consultant. He has been involved with the Insta-Mold product since 2003 and may be contacted at [info@soundguard.co.uk](mailto:info@soundguard.co.uk) or 0845 653 0233. For more information about Insta-Mold products then visit the website at [www.soundguard.co.uk](http://www.soundguard.co.uk) where further downloadable information is available. For European distribution then companies should contact 2pluxx GmbH at [www.2pluxx.ch](http://www.2pluxx.ch)*

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