

Quick disposable dust mask guidance

The purpose of disposable dust masks is to provide a means of controlling airborne containments in the air that could be inhaled by an individual. Under COSHH regulations, employers are required to provide employees with suitable personal protective equipment where necessary. This is in addition to other control measures such as dust extraction systems found within the technology department.

Any dust mask or other form of respiratory protection should limit the exposure to contamination (i.e. wood dusts) to a level that is as low as reasonably practicable and below the workplace exposure limit set for the type of substance. For example, the WEL hardwood dust is 3mg/m³ and 5mg/m³ for softwood. Both being based on an 8-hour time-weighted average.

So what types are available and what should be used?

Not suitable for technology departments

Nuisance dust masks

A nuisance dust mask (Figure 1), is a type of disposable mask that provides basic protection against larger non-toxic particles in the air. These masks are designed to be lightweight, comfortable, and affordable, making them suitable for tasks where the primary concern is general dust and particulate matter rather than hazardous or toxic substances. Nuisance dust masks are only suitable for environments where the particles present are not toxic or harmful to health.

FFP1 & FFP2

An FFP1 or FFP 2 mask (Figures 2 and 3), is a type of disposable face mask that provides minimal protection against non-toxic particles. FFP stands for "Filtering Face piece Particle" and the number proceeding it indicates the level of filtration efficiency. FFP1 masks are the lowest level of respiratory protection among the FFP masks.

FFP1 masks are designed to filter out at least 80% of airborne particles with a size of 0.3 microns or larger. They provide basic protection against larger dust particles, pollen, and other non-toxic particulate matter.



Figure 2 - FFP1 mask.

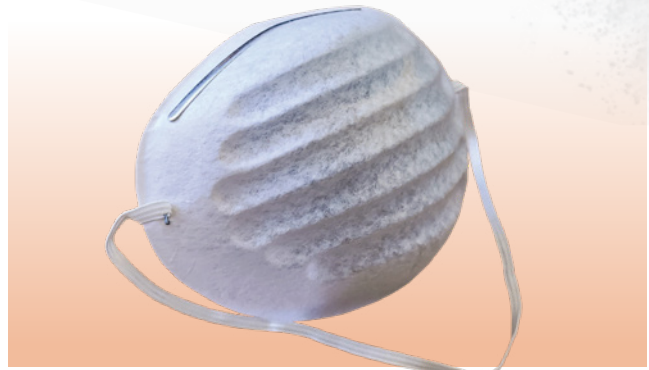


Figure 1 - Nuisance dust mask.

FFP2 masks are designed to filter out at least 94% of airborne particles with a size of 0.3 microns or larger. They provide better protection against fine dust particles, aerosols, and certain types of hazardous particles.

While FFP1 and FFP2 masks offer some level of protection, they do not provide a tight facial seal like more advanced respirators. As such, they may not be effective in situations where a secure seal is required to prevent particle leakage around the edges of the mask. FFP1 and FFP2 masks are typically disposable and designed for single-use applications. They are not meant to be reused and should be discarded after use.

Suitable for technology departments

FFP3

FFP3 masks (Figure 4) are designed to offer maximum protection against airborne particles, including fine dust, aerosols, and hazardous substances. They are designed to filter out at least 99% of airborne particles with a size of 0.3 microns or larger. They offer excellent protection >>



Figure 3 - FFP2 mask.



Figure 4 - FFP3 mask.

against fine particles, including those that could be harmful to health. They are suitable for environments where the particles present are highly hazardous and can pose significant health risks.

FFP3 masks provide a better and more secure facial seal compared to lower-level FFP masks. A proper fit and seal are critical to preventing particle leakage around the edges of the mask.

Face fit testing should be performed to ensure that the mask properly fits the wearer's face and minimises the risk of airborne contaminants leaking in around the edges of the mask and therefore reducing its performance and putting the user at risk.

These masks are typically disposable and intended for single-use applications. They should be discarded after use to ensure consistent protection.

When using FFP3 masks, it's crucial to ensure that they are certified by reputable standards organisations to ensure their effectiveness (such as CE or BSI markings). Proper use, fit, and disposal are essential for maximising the protection provided by FFP3 masks. Keep in mind that while FFP3 masks offer a high level of protection, they are not a substitute for other safety measures, and other personal protective equipment (PPE) may be necessary depending on the specific hazards present.

Half-mask/full-face respirator

Both half-mask and full-face respirators (Figure 5) are types of respiratory protective equipment designed to provide different levels of coverage and protection for the wearer's face and respiratory system.



Figure 5 - Half-mask and full-face respirators.

A half-mask respirator covers the lower half of the wearer's face, including the nose and mouth. Whereas a full face respirator covers the entire face, including the eyes, nose, and mouth.

They both typically use a filter cartridge or canister to provide protection against specific types of hazards, such as particulates, gases, or vapors. In the case of wood dusts, FFP3 filter cartridge can be fitted.

Half-mask respirators are often lightweight and more comfortable for extended wear compared to the traditional disposable masks.

The choice between a half-mask and a full-face respirator depends on the specific hazards present in the environment, as well as the comfort and protection needs of the wearer. It's important to follow manufacturer guidelines, undergo proper fit testing, and receive training on how to properly use and maintain the chosen respirator.

Powered visor respirator

A powered visor respirator (Figure 6), also known as a powered air purifying respirator (PAPR) with a visor, is designed to provide respiratory and eye protection. It consists of a clear visor or face shield that covers the eyes, nose, and mouth, combined with a powered air purification system that supplies filtered air to the user. The main part of the respirator is reusable and therefore can reduce costs over time as only the filter would need replacing. They are generally more comfortable to wear for extended periods compared to traditional tight-fitting respirators.



Figure 6 - Powered visor respirator.

These types of respirators are generally more protective than non-powered half mask respirators as a fan pushes clean filtered air down the wearers faces, creating in effect a positive pressure inside the face piece under most work conditions, which reduces inward leakage of potentially contaminated air. It should be noted that the correct type of filter should be selected and fitted to suit the contaminant being filtered.