



**Protecting your workforce**

**and your business with PPE**



Whitepaper  
September 2022

# Protecting your workforce and your business with PPE

Working in the poultry shed often involves working with machinery, as well as exposure to potentially hazardous materials such as poultry dust, disinfectants and detergents, pesticides, and pathogens such as salmonella/avian flu. Virtually every stage of work across the industry could result in exposure to inhalable substances capable of causing irritation, or allergic or toxic respiratory disease.

The law requires employers to adequately control exposure to materials in the workplace that cause

ill health and this responsibility goes beyond simply providing PPE. As a bare minimum, PPE should be CE/UKCA certified - this means that the equipment has met the minimum requirements laid down in the law for its design and manufacture. But it is an employer's duty to ensure that it is suitable for the specific job, fitted properly, and adequately maintained, and that the user should understand the risks of not wearing it.

In this whitepaper, we look at the important role that PPE plays in protecting the health of your workforce.

## Poultry dust: An unpleasant cocktail

Poultry dust is a 'hazardous agent' as defined by the Control of Substances Hazardous to Health Regulations (COSHH) 2002. Airborne particles present in poultry dust have been linked to several health hazards, including asthma, ammonia poisoning, allergic reactions (from grain dust and mites), bacterial infections and long-term respiratory illnesses. Poultry dust is a mixture of bird feed, bedding material, bird droppings, feathers and dead skin, dust mites and storage mites, and micro-organisms such as bacteria, fungi and endotoxins (cell wall components of bacteria).

HSE has guidelines\* for minimising poultry dust in the working environment, but many activities in the poultry shed will typically create airborne poultry dust, including moving birds, laying bedding and cleaning activities. Wearing the correct Respiratory Protective Equipment (RPE) is essential to significantly reduce a worker's exposure to this harmful dust.

\*Available at [hse.gov.uk/pubns/ais39.pdf](https://www.hse.gov.uk/pubns/ais39.pdf)

## Constituents of poultry dust

### Visible:

- Bird droppings
- Feathers and dander
- Softwood shavings
- Straw

### Invisible:

- Bacteria/endotoxin
- Dust and storage mites
- Fungi (Moulds)

## Respiratory protection

RPE varies enormously, but need not be complicated. An employer has a duty, firstly, to ensure that it is adequate for the hazard and reduces exposure to the level required to protect the wearer's health.

And secondly, that it is suitable for the wearer, task and environment, so that the wearer can work freely and without additional risks due to the RPE.

# Respiratory protection

Respirators, or masks as they are often called, use filters to remove contaminants from the air being breathed in. The filter material will be different depending on the hazardous substance and its form. There are two basic filter types available, particle filters and gas/vapour filters. It is vital that the filter in the mask used is matched to the hazard of the job – particle filters do not protect against gas or vapour and gas/vapour filters do not protect against particles. Some situations may require both types of filter.

Masks that protect against poultry dust can be disposable, or re-useable with changeable filters. The filter is an intrinsic part of the mask, whether it is powered or non-powered, disposable or re-useable. Masks have different filtering protection levels on a scale of 1-3, FFP1 being the least protective and FFP3 being the highest. Where poultry dust is present, HSE advises to always use a dust mask that is either FFP2 or FFP3.

Masks can be non-powered, which relies on the wearer's breathing to draw air through the filter, or powered, which uses a motor to pass air through the filter to give a supply of clean air, thereby making it more comfortable for longer more strenuous tasks.

## Face masks must be fit tested

It is unlikely that one particular model or size of face mask will fit everyone in the team, as faces do vary. An inadequate fit will reduce the protective effect of the equipment and may even discourage the wearer from using it. A fit test according to the manufacturer's instruction should be carried out as part of the initial selection of the RPE, and if there is any subsequent change to the equipment or, indeed, the wearer. In addition to the initial fit test, workers should be encouraged to check the 'face fit' every time they put on their mask.



➤ Disposable, reusable and powered masks

## Comfort is an important part of safety

It is recommended that continuous wear time for tight-fitting, unpowered RPE is less than an hour, after which the wearer should take a break. Otherwise, the RPE can become uncomfortable to wear, leading to loosening or removal of the mask in the work area, which obviously reduces or removes the protective effect. Where RPE is required to be worn continuously for long periods, powered respirators are a better option. Masks with exhalation valves can help to reduce heat and moisture, making them more comfortable to wear. Because of the necessary tight-fitting nature of face masks, it is vital that they are fitted properly and are as comfortable as they can be, so that they can be worn for longer periods without adjustment.

Some masks, such as the [Force 8 half-mask](#), come with the PressToCheck™ filter, which helps to check that the seal is effective. ➤





## Record keeping

HSE recommends having a system in place which reviews when a repeat fit test may be required. The British Safety Industry Federation recommends a re-test at least every two years. Detailed guidance on fit testing can be found on the [HSE website](#). Records of the fit test by means of a report or certificate should clearly state whether the result of the fit test was a pass or fail and these reports should be made available to the employee and filed so that appropriate bodies can access them if required. RPE examinations and tests should be kept for at least five years.

## Eye protection

Eye protection is also an important factor of worker safety in the shed environment. Eyes should naturally be protected from dust and other objects, but pesticides, ammonia, detergents and disinfecting chemicals can be particularly harmful. There is a difference between [safety spectacles](#), which protect against objects, and [safety goggles](#), which have close-fitting seals to prevent drifting clouds vapour or liquid splashes reaching the eyes. Comfort is an important element of protective eyewear, as it reduces the temptation to adjust the goggles, touching the face or eyes with contaminated gloves. An anti-mist coating on the lenses can also help to reduce the likelihood of this.



## Hand protection

Hands are vulnerable in the shed environment and a number of factors need to be considered when choosing protective gloves. →

- Identify the substances handled
- Identify all other hazards
- Consider the type and duration of contact
- Consider the user - size and comfort
- Consider the task

Certain types of rubber or plastic will only be suitable for certain chemicals - the manufacturers' guidelines will normally show how well their gloves perform against different substances. Coverage is also important - chemically resistant gloves, or gauntlets, should extend up the forearms to ensure total protection. [Nitrile-dipped](#) gloves provide protection across the palm and the fingers whilst allowing the upper part of the hand to breathe. [Cut-resistant sleeves](#) can give an extra layer of protection if required - for example if working with turkeys. Gloves should fit and allow for dexterity as well as providing protection and training should be provided on how to remove gloves without contaminating hands. Some people have allergies to latex - nitrile or vinyl gloves are excellent alternatives.

## Boots and overalls

Again, protective overalls should be matched to the task. For example, [type 5/6](#) should be used to protect against hazardous dust and splash protection from light liquid spills - polypropylene material is lightweight and breathable and does not attract dust as cotton does. For chemical handling, [type 3/4](#) should be worn. If working with chemicals, chemically resistant overalls should leave no areas of the body exposed and chemically resistant boots should protect feet from spillages. These are especially important if the wearer needs to walk across treated surfaces. In some cases, overalls providing protection against [biological hazards](#) will be required.





## Always provide proper training

Finally, it's essential that everyone on the farm understands their responsibilities and what they need to do to keep themselves and others safe. As well as supplying staff with PPE, a responsible employer will provide the right training on how to use, store, and monitor it correctly, checking for faults and damage and knowing how to change filters and cartridges in their respirators, for instance. And of course, putting on PPE before entering a hazardous environment should be second nature.

**Our mission is to optimise the profitability of every intensive farming cycle through enhanced health and welfare.**

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