

# Respirators and Dust Exposure

## Dust is a Hazard

Dust can be more than just a nuisance – it has the potential to cause serious health effects. Small airborne particles can bypass our body's natural defence mechanisms to build up in the lungs. Activities such as grinding, moving, cutting and or heating of materials all have the potential to create hazardous dust.

The health risk associated with any dusty job depends on multiple factors including; type of dust, the concentration of dust, and the duration of exposure. The resulting health effects may only become obvious after long-term and repeat high exposures; this is often the case with lung disease such as silicosis.

## Control Measures

Selecting an appropriate control often involves completing a risk assessment to identify, evaluate, and prioritize the hazards and risks. With the exception of eliminating the source of dust, preventing dust from becoming airborne is the most effective control. Other options may include:

- Using local exhaust ventilation (LEV).
- Using water and wet working methods, like sprays.
- Substituting powder products for pastes/pellets
- Using vacuum cleaners instead of sweeping.
- Using the correct tools for the tasks.
- Using pressurised cabins.
- Restricting access to dusty areas.
- Using the correct PPE.

## How to Protect Yourself

Using specified controls is critical to reduce your exposure (as well as to your teammates). Personal protective equipment (PPE) can be an effective control, however, it should be used as a last resort or in conjunction with other control measures.

Respiratory protective equipment (RPE) is a type of PPE that protects people from breathing in hazardous substances, such as dust.

## Using RPE Correctly

RPE is only effective when it is worn correctly each time there is a risk of exposure. For respirators, incorrect use or an inappropriate fit can reduce the protection provided and leave workers exposed to unsafe levels of airborne contaminants.



Important considerations include:

- Select the right respirator for the task and check safe operating procedures to ensure the RPE is used as instructed.
- Perform a visual check to ensure RPE is clean and in good condition.
- Ensure your RPE is fitted correctly by a competent person. Fit testing should be carried out before issue, at 12 monthly intervals, and whenever there is a change of facial characteristics in the wearer.
- Some types of RPE, such as close face fitting respirators, require a tight seal around your face to be effective. Please note facial hair, and even stubble, can make it difficult to get a good seal and result in leakage of contaminated air.
- If you're using more than one piece of PPE, it's important to make sure that they're able to be used together. For example, using safety glasses may disturb the seal of a respirator causing air leaks and allowing contaminated air to enter your lungs.

## Maintaining RPE

Maintaining your RPE in accordance with the manufacturer's recommendations is essential for making sure the equipment continues to provide the degree of protection for which it was designed.

- Follow instructions on how to use and clean RPE correctly.
- Store your RPE in accordance with the manufacturer instructions. Generally, it should be stored in a clean and dry place, with easy access to encourage use.
- Regularly check RPE for defects or signs of damage. Damaged equipment should be replaced immediately. (Note: RPE used for gas or vapours may have additional storage requirements.)

## Keeping Up To Date

It's important for fit testing to be carried out and recorded for each worker that is required to use RPE. In accordance with Australian Standards (AS1715), we recommend conducting fit testing annually as a minimum to verify workers are familiar with how to use and fit masks correctly.

## Summary

Exposure to dust has the potential to cause a range of health effects, some as severe as lung cancer. However, by appropriately using controls, such as RPE, we can reduce our risk of exposure to dust and protect our health.

## More Information

For more information or advice around working with dust, the use of RPE or respirator fit testing, please contact GCG on 1300 424 474 or via [info@gcg.net.au](mailto:info@gcg.net.au).

GCG's occupational hygiene consultants are professionals in the industry who are certified with the Australian Institute of Occupational Hygienists (AIOH).

