

## Breathe easier

Last month we talked about the **Glove up campaign**, designed to get painters ensuring they have suitable protection to keep them safe from harm. Protecting yourself includes making sure that when the job calls for it, you not only have the right respiratory protection but you use it properly.

Chemical vapour exposure and dusty work environments present workplace respiratory health hazards. To protect yourself and your workers adequately, appropriate respiratory protection must be available. But it's more than a simple matter of having personal protective equipment available – you need to have the right type of equipment, you need to know how to use and look after it and you need to ensure respiratory protection equipment is replaced when cartridges or filters are exhausted.



### How long will cartridges and filters last in use?

The service life of cartridges and filters depends on a number of factors, including the type and amount of contaminant in the air, the breathing rate of the wearer, ventilation, humidity, and respirator storage.

### How do you know when cartridges and filters need to be changed?

Gas and vapour cartridges must be changed when contaminant can be detected coming through the cartridge by smell or taste – this is called breakthrough. It means the cartridge absorbent material is used up and no longer able to protect the wearer from the contaminant.

Particulate filters must be changed when breathing resistance increases and it becomes uncomfortable to breathe through the filter. This indicates the filter is blocked and has reached its capacity to filter particles.

### How do you prevent a filter cartridge from being used to the point of breakthrough so you don't have to smell or taste the contaminant?

To avoid smelling or tasting the contaminant, use the following recommended practice:

1. Write the date on your cartridges when first removed from packet.
2. Use the cartridges on your respirator in a normal work environment.
3. When you can smell or taste the contaminant the cartridge is used up. Work out how long the cartridge lasted by comparing the date it was used up to the date recorded on the cartridge.
4. Replace cartridges at two thirds of this time in future.

### What is the shelf life of cartridges and filters?

Provided they are stored unopened in their original packaging, most cartridges and filters will last five years. Once removed from their packaging, they should be replaced after six months.

### What happens if you do not use a particulate pre-filter with your respirator cartridge?

The particulate filter is more important for protecting your health than the respirator cartridge. The pre-filter removes tiny droplets of particles in the air (e.g. mists from spray painting). The cartridge does not filter these particles, and if no pre-filter is used, they could be breathed in.

### Can you wear a respirator with a beard?

Any facial hair may result in an incomplete seal around the face, thus allowing some chemical vapours and particulates through. It's best for anyone required to wear respiratory protection to be clean-shaven, to ensure the respirator can form a good seal against the face.

### How should you store your respirator?

Respirators should be kept in an airtight container (e.g. bucket with sealed lid) when not in use. Cartridges continue to absorb solvent vapours from the air during storage, so their service life may be reduced if they are not stored correctly.

### Where can you find out more?

The Department of Labour's OSH website offers numerous publications relating to occupational health issues in relation to workplace exposure to chemicals and dust: [www.osh.dol.govt.nz/order/catalogue/index.shtml](http://www.osh.dol.govt.nz/order/catalogue/index.shtml)

And of course, where possible and appropriate choose lower hazard paints, such as **Resene Environmental Choice** waterborne paints. Where more hazardous products are essential for the project, then protect yourself against the hazards – your body will thank you for looking after it.



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*Thanks go to NZ Safety for providing this information to keep everyone safe.*