



Respiratory protective equipment - Fit testing requirements

Employers are required to ensure that where fitted respirators are required to protect health, these are correctly fitted. Examples of fitted respirators (also called respiratory protective equipment or RPE) includes P2 dust masks, half face re-usable respirators with cartridges or tight fitting powered air purifying respirators.



Figure 1 – Examples of respirators requiring correct fitting

RPE is used in workplaces when higher order controls cannot be implemented or do not sufficiently control the hazard. It plays an important role as the last line of defence to protect workers' health from chemicals such as solvents, gases, diesel exhaust particulate, other particulates including biological material (such as respiratory droplets that may contain infectious disease and pollen), and dusts like silica and asbestos.

Employers must, as far as practicable ensure the correct selection, proper fit and use of RPE. If RPE does not fit properly because of different facial shapes, beards or stubble, the worker will not be protected. If there is not a good seal between the respirator and face, contaminated air will leak into the respirator and the wearer may not get the level of protection that is needed to protect them. This means being clean-shaven or only having facial hair that does not interfere with the fitting surfaces and the valve of the respirator. For workers who want to keep facial hair that may interfere with the operation or proper fit of tight-fitting respirators, a powered air purifying respirator with a loose hood may provide the protection needed.

Only fit testing can assure both the worker and the employer that the RPE fits correctly and will provide the intended protection when correctly worn each and every time on the job. Fit testing is a mandatory requirement of *AS/NZS 1715 Selection, use and maintenance of respiratory protective equipment*, which also details the different fit testing methods. Fit testing measures the effectiveness of the seal between the respirator and the wearer's face. It is required for all tight fitted respirators, including half-face disposable, half-face reusable, full-face reusable and powered air purifying respirators (PAPR).

There are two methods of fit testing that meet *AS/ NZS1715:2009 Selection, use and maintenance of respiratory protective equipment*:

- Qualitative – a pass/fail test that relies on the wearer’s ability to taste or smell a test agent. This type of test can only be used on half-face respirators. Some workers have difficulty with their ability to taste or smell. This can result in the potential for a false pass to the qualitative fit test and worker health not being adequately protected.
- Quantitative – uses specialised equipment to measure how much air leaks into the respirator. This type of test can be used on all types of RPE.

All fit testing must be carried out by a competent person (which can include a manufacturer, supplier or consultant):

- before wearing RPE for the first time
- each time a new make or model of RPE is issued
- whenever there is a change in the wearer’s facial characteristics or features which may affect the facial seal (e.g. large weight loss or gain).

In addition, workers should be encouraged to perform a simple positive or negative pressure fit check every time they fit their RPE before entering a contaminated area.

Fit testing should be repeated on a regular basis based upon risk assessment and a written record of fit tests carried out for each worker should be kept. This should include the type of test performed, the make, model, style and size of respirator tested and the date and result of the test. Workers should be issued with a fit test record card after fit testing.

Further information

- [Find a Fit Tester – RESP-FIT](#)
- AS/NZS 1715-2009 Selection, use and maintenance of respiratory protective equipment – available for purchase from [Standards Australia](#).

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