BREATHE FREELY Australia

AIOH Australian Institute of Occupational Hygienists

BOHS The Chartered Society for Worker Health Protection

Controlling exposures to prevent occupational lung disease

Respiratory Protective Equipment (RPE) Guidance 5/5

5. Fit testing

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As our faces come in all shapes and sizes, each wearer needs to be supplied with a face mask which fits them properly. Fit testing is a method which demonstrates how well a face mask fits an individual wearer's face.

Is Fit Testing a legal requirement?

Selecting a suitable mask is a legal requirement, and fit testing is a means of demonstrating suitability for the intended wearer.

What type of face masks need to be fit tested?

All tight-fitting masks

These are masks whose performance relies on achieving a good seal between the mask and the wearer's face. These include:

Disposable masks

P1, P2 and P3 filtering face pieces

Re-usable half masks

Full face masks

Including those used with powered respirators and breathing apparatus

Who can conduct the fit test?

Fit testing should be conducted by a competent person.

Tight-fitting respirators must seal to the wearer's face in order to provide expected protection. This includes disposable respirators (also called "filtering facepieces").

Fit testing is required by Australian New Zealand Standard AS/NZS1715 before a user wears a respirator on the job, and should be assessed at least annually. In addition, fit tests should be performed:

- Whenever a different size, style, model or make of respirator is used.
- When any facial changes occur that could affect fit, such as significant weight fluctuation or dental work.

AS/NZS1715 does not require fit test administrators to be certified, just to know how to conduct a test, recognize invalid tests, and properly clean and maintain equipment.

A good fit means the respirator will seal to your skin.

Your options

There are two options as follows:

Contract out a fit tester

Companies can visit sites with their equipment and complete the fit testing for you.

Develop an in-house fit test capability

In order to become competent there are many practical skills to be developed. Seek training and gain the skills from a recognized training provider.

Will I need to consider re-tests? **Yes**

A fit test should be repeated if the wearer:
- loses or gains weight
- undergoes any substantial dental work, or
- develops any facial changes around the face seal area.

Please be aware if a new make or model is issued, a new fit test is required by the wearer.

Additionally a change in head-worn PPE - eg helmets and goggles - may require a re-test. It is good practice to have a system in place to ensure that repeat fit testing is carried out on a regular basis.

Which fit testing method should I choose?

This depends on the type of mask.

There are two basic types – qualitative and quantitative. The table below provides information on the two methods to help you select the appropriate one for the type of RPE you use.

Qualitative fit test (QLFT)

- Lower purchase cost than QNFT equipment
- Cannot be used to fit test full face masks
- Provides a pass/fail result based on the wearer's subjective assessment depending on their taste response
- Fit test can take longer than a QNFT due to the time required for the RPE wearer to clear their palate
- No facility to check the fit of a mask prior to a fit test
- Some wearers are not able to taste the fit test substances
- Requires fit test information to be recorded manually
- Does not require a power source
- Requires training in its use

Quantitative fit test (QNFT)

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- Higher cost than QLFT equipment
- Can be used to fit test all types of tight-fitting masks
- Provides an independent objective measure of fit
- Fit test can be quicker than a QLFT
- Has a real-time fit-check facility to check the fit prior to the fit test, or as a means of investigating poor fitting masks
- Independent of wearer's taste response
- QNFT software incorporates a database for recording fit test information
- Requires a power source
- Requires training in its use