

Fact sheet

Facial hair and respiratory protective equipment

March 2024

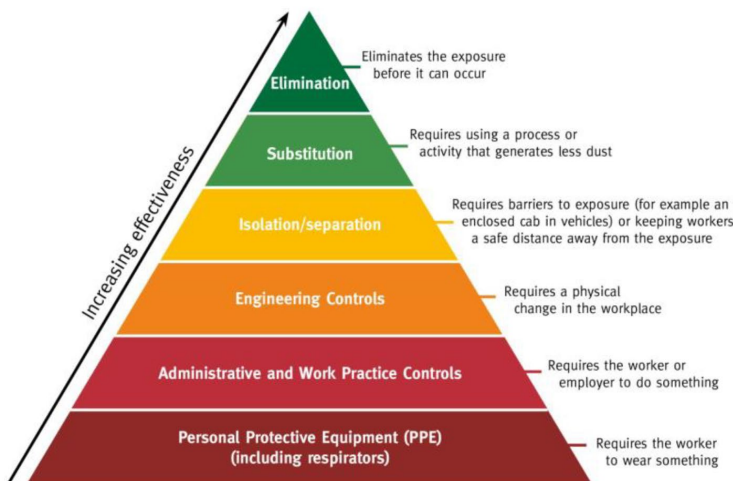
Purpose

This document provides mine operators with information about workers with facial hair and the requirement to wear respiratory protective equipment to control the risk of exposure to airborne contaminants in the workplace.

Risk control requirements

In accordance with Part 3.1 of the Work Health and Safety Regulations (2017), a person conducting a business or undertaking at a mine or petroleum site must eliminate or minimise the risk to health and safety so far as reasonably practicable. The hierarchy of control must be implemented to minimise identified risks to health and safety associated with operations at the mine or petroleum site.

Figure 1: Hierarchy of control



If a risk remains, the WHS Regulation (2017) places duties on the person conducting a business or undertaking to minimise the remaining risks to health and safety so far as reasonably practicable by:

- i. implementing administrative controls
- ii. by ensuring the provision and use of suitable PPE.

The use of respiratory protective equipment must only be considered if all reasonably practicable higher order controls have been considered and implemented where applicable.

Fact sheet

Facial fit of respirators

The effectiveness of tight-fitting respirator face pieces, such as half-face or full-face respirators that uses straps, relies on a good seal with the worker's face. If a respirator does not fit properly, the wearer will not get the expected level of protection.

Australian Standard 1715:2009 Selection, use and maintenance of respiratory protective equipment, recommends that 'suitable fit' is verified through 2 complementary methods of qualitative or quantitative 'fit testing'.

- Qualitative fit testing - is a pass/fail test that relies on the wearer's ability to taste or smell a test agent. This type of test can be used on half-face respirators.
- Quantitative fit testing – uses specialised equipment to measure how much air leaks into the respirator. This type of test can be used on half-face and full-face respirators.

Additionally, a fit check is required. This is a quick check undertaken by the user each time a respirator is put on to ensure the respirator is properly positioned on the face and there is a good seal between the respirator and face.

Standards Australia has now adopted the ISO Respiratory Fit Testing Standard as a local standard. The local designation is AS/NZS ISO 16975.3:2023 Respiratory protective devices – Selection, use and maintenance. Part 3: Fit-testing procedures. This standard stipulates the requirement for the worker to be clean-shaven, preferably within 12-hours, before undertaking the fit test. Furthermore, a worker shall not be fit tested if hair comes between the sealing surface of the respiratory protective equipment and the face or neck, or if facial hair interferes with the valves and/or function of the respiratory protective device.

The requirement for workers to undergo a respiratory fit-test forms part of the compulsory pre-placement and periodic medical assessments performed under Order 43 Coal Services Health Monitoring Requirements for Coal Mine Workers.

Fitting all types of respiratory protective equipment must always be in accordance with the manufacturer's instructions. Initial sizing/fitting must be carried out by a competent person who has undergone appropriate training. Further information on fit-testing training and testing providers is available on the [Resp-Fit website](#).

Facial hair and the adequate performance of respiratory protective equipment

Particular attention must be paid to the presence of facial hair when wearing any type of tight-fitting respiratory protection as an adequate seal may be difficult to achieve for people with facial hair. Excessive stubble, moustaches or beards may prevent a satisfactory seal between the respirator and skin. This may result in inadequate protection being provided.

The Standards Australia SF-010 Respiratory Protection Committee has published a ruling to AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment which provides clarification around the requirements for tight-fitting respirators and facial hair. The ruling states:

Fact sheet

- facial hair can interfere with the face seal/sealing surface area for a tight-fitting full facepiece or half facepiece facemasks for respirators including positive pressure, air-supplied (continuous flow or positive pressure demand) or PAPR (continuous flow or positive pressure demand) respirators.
- there are no exceptions regarding facial hair and any tight-fitting respirator (negative or positive pressure) in regard to compliance with AS/NZS 1715 when the wearer has facial hair within the sealing area of the facemask.
- positive pressure facepieces are to be fit tested in negative pressure to isolate the fit performance of the facepiece and the wearer.

In summary, when a worker is required to use tight-fitting respiratory protective equipment as a risk control measure, the worker must ensure that any facial hair between the skin and the facepiece sealing surface is removed, to achieve a suitable fit in accordance with AS/NZS 1715.

It is a risk control measure to require workers to partially or fully remove facial hair to ensure an adequate facial seal for the respiratory protective equipment can be achieved. International standards, including AS/NZS 1715:2009, ISO 16975-3, OSHA 1910.134, also states there should be no facial hair on a wearer's face underneath a tight-fitting respirator sealing surface area. Facial hair prevents an adequate seal from being achieved, and the level of protection is neither reliable nor predictable.

Note: The Standards Australia Committee SF-010, Occupational Respiratory Protection, as well as the International Committee ISO/TC 94/SC 15, Respiratory protective devices, are currently discussing and reviewing available information and studies on facial hair and the use of respirators as to whether further changes to the fit testing arrangements and the use of facial hair with respirators can be considered within the appropriate standards.

Workers not able to remove or refusing to remove facial hair

It is acknowledged that some workers may not be able to remove facial hair for cultural, religious or medical reasons. While it is imperative that safety remains the paramount consideration, consultation with a worker should occur to ensure that all relevant issues or concerns are considered by all parties, before any final decision is made.

Where reasonable adjustment for cultural, religious or medical reasons can be made, this should be facilitated on a risk-assessed basis. Depending on the circumstances, this may include assessing whether alternative PPE can be made available, or alternative or concurrent risk control measures are appropriate, transfer to a lower risk setting or temporary remote or flexible work arrangements. Where appropriate this may include the use of a suitable loose-fitting powered air-purifying respirator (PAPR).

However, it is also possible that in some circumstances, where the work simply cannot be safely undertaken without the proper use of respiratory protective equipment, the worker may not be able to perform the work. This may arise despite the availability of PAPR in some circumstances.

Fact sheet

Relevant Legislation and Standards	
Work Health and Safety Act 2011	Provides a nationally consistent framework to secure the health and safety of workers and workplaces. Workers and other persons at the workplace must also take reasonable care for their own health and safety; and care that their conduct, acts or omissions do not adversely affect the health and safety of others.
Work Health and Safety Regulation 2011	Division 5, Section 44 (3) of the Regulation describes how to prevent or minimise risk at the workplace and includes provisions specifically regarding PPE suitability, size, fit, maintenance, hygiene and use.
Australian/New Zealand Standards	AS/NZS 1715:2009 Rule 1:2023 - Selection, use and maintenance of respiratory protective equipment. AS/NZS 1716:2012 - Respiratory protective devices. AS/NZS 16975.3:2023 Respiratory protective devices - Selection, use and maintenance, Part 3: Fit-testing procedures.
International Standards	AS/NZS 16975.3:2023 Respiratory protective devices, selection use and maintenance- Part 3 Fit-testing procedures. OSHA 1910.134 Occupational Safety and Health Standards- Respiratory Protection.

© State of New South Wales through Regional NSW 2024. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute Regional NSW as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (March 2024) and may not be accurate, current or complete. The State of New South Wales (including Regional NSW), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.