

INFORMATION SHEET 5

PERSONAL PROTECTIVE EQUIPMENT TO USE WHEN WORKING WITH ASBESTOS

Personal protective clothing and equipment is an essential line of defence for minimising an asbestos hazard when elimination and isolation are not practicable.

WHAT IS PERSONAL PROTECTIVE EQUIPMENT (PPE)?

Personal protective equipment (PPE) is any clothing or equipment that provides protection to the wearer from a potential hazard.

WHAT PPE MUST BE WORN WHEN ASBESTOS IS OR MAY BE PRESENT?

If asbestos is or may be present, PPE must include:

- > respiratory protective equipment (RPE) – to avoid inhaling asbestos fibres (see our fact sheet on health risks from asbestos)
- > overalls (either disposable or able to be washed*) – to avoid the risk of carrying asbestos fibres away from the worksite on clothing
- > footwear – appropriate for the work being undertaken (footwear should be non-laced as laced footwear is difficult to clean – alternatively wear disposable boot covers).

* Washing must only be done in laundries specifically set up for handling asbestos-contaminated clothing (in accordance with regulation 10(2)(b) of the Health and Safety in Employment (Asbestos) Regulations 1998). It must not be done at home or a public laundromat.

WHY IS PPE REQUIRED?

Although controls must be in place to prevent or reduce exposure to asbestos fibres when working with asbestos-containing material (ACM), the asbestos hazards must be minimised even more by using appropriate personal protective equipment.

RESPIRATORS

When should a respirator be worn?

A respirator or RPE should be worn **at all times** by workers in any environment where asbestos is or suspected to be present to minimise the risk of breathing in asbestos.

What types of respirators are available?



Disposable half-face respirator



Re-useable half-face respirator (cartridge)



Full-face respirator (cartridge)



Full-face powered respirator (cartridge)

What else do I need to know about respirators?

Facial hair and/or glasses when wearing a respirator

Facial hair (a beard, stubble growth or sideburns) or wearing glasses may affect the ability for a full face seal around the mask. Men should be clean-shaven when wearing a respirator.

Glasses may prevent an effective seal around the face of a full face-piece respirator. If glasses cannot be modified, a positive-pressure air-supply hood should be worn.

Respirator fit testing

A respirator fit test must be done when the respirator is fitted for the first time to ensure that a good seal is achieved around the edges of the respirator. Fit testing assesses the seal between the wearer's face and the face-piece using specialised equipment. Testing must be carried out by a trained tester.

Fit-testing must also be carried out:

- > if the wearer has had a significant weight gain or loss
- > if a different size or model of RPE is specified
- > annually (or more frequently if specified by company policy).

Search the Yellow Pages or internet for a health and safety consultant or occupational health practitioner that does respirator fit testing.

Self-testing

Self-testing should be done each time the wearer puts a respirator on. No specialised equipment or training is required for testing.

Tests are carried out as follows:

- > Place hands over the mask or filters and breathe in – the mask should pull more firmly onto the face.
- > Block the exhalation (breathing out) valves and breathe out hard – you should notice a bulging effect, but it should not leak. Note: If the mask leaks, readjust the straps. If it still leaks you need to change to a different size or model of respirator and have another fit test done.

Selecting the correct respirator¹

Work procedure	Required respirator	Filter type (Note 1)
Simple enclosure erection for containing undamaged asbestos materials - no direct handling but possible asbestos disturbance	<ul style="list-style-type: none"> > Disposable half face-piece particulate, or > Half face-piece particulate filter (cartridge) respirator 	P2
Inspection of installed friable asbestos in poor condition or appears disturbed	<ul style="list-style-type: none"> > Disposable half face-piece particulate, or > Half face-piece particulate filter (cartridge) respirator 	P2
Sampling material for asbestos identification	<ul style="list-style-type: none"> > Disposable half face-piece particulate, or > Half face-piece particulate filter (cartridge) respirator 	P2
Working with asbestos-cement eg hand-drilling or sawing	<ul style="list-style-type: none"> > Disposable half face-piece particulate, or > Half face-piece particulate filter (cartridge) respirator 	P2
Removing non-friable asbestos eg asbestos-cement or ceiling tiles	<ul style="list-style-type: none"> > Disposable half face-piece particulate, or > Half face-piece particulate filter (cartridge) respirator 	P2
Maintenance work near installed asbestos insulation - no direct handling but possible asbestos disturbance	<ul style="list-style-type: none"> > Full face-piece particulate filter, cartridge respirator 	P3
Maintenance work involving removing small quantities of asbestos eg replacing gaskets or insulation	<ul style="list-style-type: none"> > Full face-piece particulate filter (cartridge) powered respirator, or > Full face-piece positive-pressure demand airline respirator, or > Full suit or hood continuous-flow airline respirator 	P3

¹ From Appendix C, *New Zealand Guidelines for the Management and Removal of Asbestos* - Copyright © New Zealand Demolition and Asbestos Association

Note 1: Filters restricting the flow of airborne particles are rated P1, P2 and P3. A P2 filter will stop 94% of airborne particles and may be used for non-restricted asbestos work; a P3 filter will stop 99.95% of airborne particles and must be used for restricted asbestos work. The higher the level of risk, the higher the protection should be.

Inspection, maintenance and storage of respirators

After each use:

- > clean and dry the respirator face-piece
- > check diaphragms, valves and face-piece parts for defects
- > recharge batteries for powered-air respirators as required
- > store in a clean, dry container.

Note: Do not store clean RPE with contaminated (non-cleaned) RPE.

RPE Standards

RPE should be selected, manufactured, fitted, tested and maintained according to AS/NZS 1715:2009 *Selection, use and maintenance of respiratory protective equipment* and AS/NZS 1716:2012 *Respiratory protective devices*.

OTHER PPE

What other PPE should be worn?

Depending on the nature of the work being carried out, other PPE may also be required. This may include:

- > eye protection (safety goggles)
- > hard hat
- > gloves
- > disposable overalls and boots.

How is asbestos-contaminated PPE cleaned or disposed of?

PPE should be put on in a clean part of the decontamination area.

When the work is finished, the PPE (except for the respirator) should be taken off and disposed of in the dirty part of the decontamination area. This is to prevent clean clothing from becoming contaminated with asbestos fibres.

Reusable PPE (RPE, boots, etc) should be decontaminated by vacuuming with a brush attachment on a vacuum cleaner². After vacuuming, the PPE should be wiped with a disposable, damp cloth.

Reusable PPE should be stored in a sealed container when not in use.

The filter in the vacuum cleaner should be a HEPA filter complying with AS 4260:1997 High efficiency particulate air filters (HEPA) – Classification, construction and performance.

What is the employer's responsibility regarding PPE?

Employers must:

- > supply, pay for and fit test RPE for employees
- > ensure that employees wear PPE when necessary
- > provide training to employees in how to use PPE safely at the start of employment and at regular intervals on an on-going basis
- > provide secure storage for reusable PPE.

Training in the use of PPE should include correct use, inspection, care and maintenance, repair and replacement of components, emergency procedures and storage.

What should be considered when selecting and using PPE?

When choosing PPE, also think about:

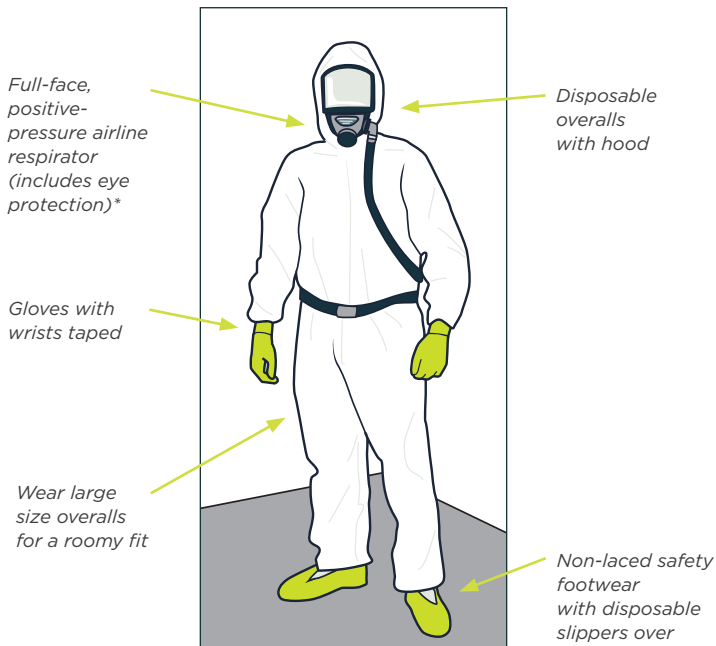
- > ease of decontamination and cleaning
- > communicating with other workers
- > the temperature of the work environment
- > the ability to move freely, eg an air-line respirator may restrict movement.

² A vacuum cleaner for cleaning asbestos contaminated material should comply with AS 3544:1988 Industrial Vacuum Cleaners for Particulates Hazardous to Health and must be labelled with a high hazard 'H' class symbol and the words 'For asbestos use only'.

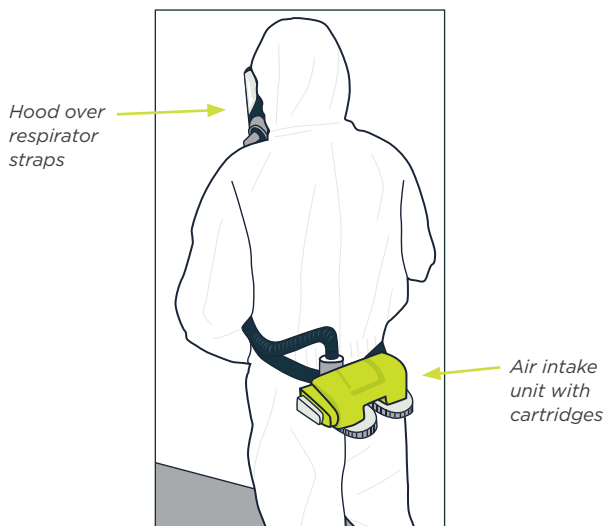
Tips for wearing PPE

- > Wear large size overalls for a comfortable fit.
- > Tape loose cuffs to seal.
- > Wear overalls over boots (ie not tucked into them).
- > Cover RPE straps with a hood.
- > Wear safety footwear without laces – do **not** wear laced boots as they are difficult to clean properly.
- > Wear disposable slippers over boots and remove before leaving the contaminated area – this avoids the likelihood of picking up asbestos fibres on the soles of the boots.

PPE required when carrying out restricted asbestos removal work



* Note that a full-face, positive-pressure airline respirator is not mandatory for asbestos removal unless the worker cannot wear a negative pressure respirator.



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