

# Protective clothing and equipment for working with or near asbestos

July 2024



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### 1.0 Introduction

#### What is this guidance about?

This guidance provides information about personal protective equipment (PPE) for working with or near asbestos. It can help persons conducting a business or undertaking (PCBUs) to meet their duties under:

- the Health and Safety at Work Act 2015 (HSWA)
- the Health and Safety at Work (General Risk and Workplace Management)
   Regulations 2016
- the Health and Safety at Work (Asbestos) Regulations 2016.

#### Who should read this guidance?

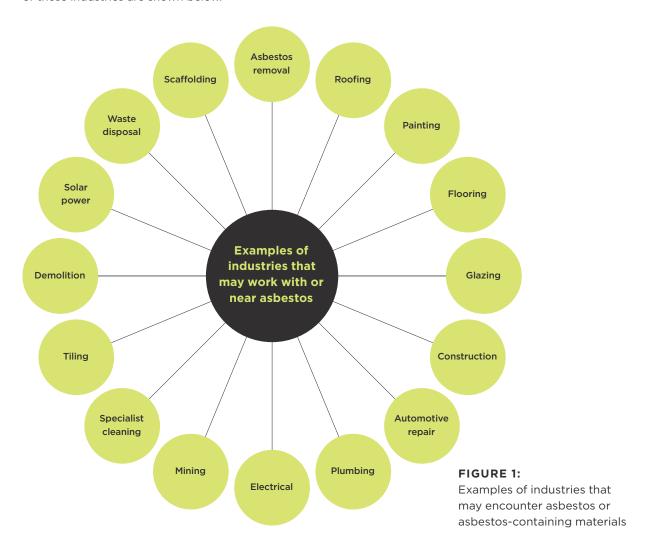
This guidance is for PCBUs that carry out any work where there is a risk of exposure to asbestos fibres.

In this guidance, 'you' means the PCBU. A PCBU is an individual or a company, but it can also be other types of organisations. More information about PCBUs is available on the WorkSafe New Zealand website Who or what is a PCBU?

#### What work is covered by this guidance?

This guidance covers any work where there is a risk of exposure to asbestos fibres.

There are many industries where workers may encounter asbestos. Some examples of these industries are shown below.



#### What workers are covered by this guidance?

This guidance covers all workers that work in environments where there is a risk of exposure to asbestos fibres. Examples include:

- workers of PCBUs involved with the management of asbestos in residential and commercial properties
- workers of PCBUs that carry out work on or near asbestos or asbestoscontaining material (ACM)
- workers of PCBUs that carry out work in environments where there is likely to be airborne asbestos fibres
- workers of PCBUs that own or manage property that contains asbestos
- labour hire, temporary workers, and apprentices of such PCBUs.

#### What are the risks of working with or near asbestos?

Anyone that works with or near products that contain asbestos is at risk of exposure to asbestos fibres.

Breathing in airborne asbestos fibres can cause them to get trapped in the lungs, leading to serious health issues such as lung cancer, mesothelioma, and asbestosis. The health risks increase when:

- more asbestos fibres are inhaled
- exposure to asbestos happens more often
- exposure happens over a long period of time.

Diseases caused by asbestos often cannot be cured. They can cause severe symptoms and can be life-threatening.

#### More information about asbestos in New Zealand

For more information about the health risks of asbestos and the history of asbestos management in New Zealand see Asbestos in New Zealand

## 2.0 General requirements for workplace PPE

#### Introduction to personal protective equipment

Personal protective equipment (PPE) is any equipment that will help to protect the user against health or safety risks at work. Examples of PPE are shown in Figure 2.

PPE is the last line of defence and is not meant to be the sole method of reducing risk. PPE provides protection for workers when other reasonably practicable control measures cannot adequately eliminate or minimise risks to health and safety.



#### PPE for minimising the risk of exposure to asbestos fibres

Suitable PPE is required for any work where there is a risk of exposure to asbestos fibres. The types of PPE that are commonly used when working on or near asbestos are shown in Table 1.

TYPE OF PPE	EXAMPLE	PURPOSE	
Protective clothing	Disposable coveralls	Protective clothing helps to prevent contamination of workers' clothing with asbestos fibres.	
		This helps to minimise the risk of spreading asbestos fibres (for example, into workers' homes).	
Respiratory protective equipment (RPE)	Respirator with filter	RPE helps to minimise the risk of workers breathing in asbestos fibres.	
Foot protection	Gumboots and shoe coverings	Foot protection that is easy to clean helps to prevent the spread of asbestos fibres outside of the work site.	
Hand protection Single-use gloves		Hand protection minimises the risk of asbestos fibres getting stuck under workers' fingernails or getting into cuts and grazes.	
Eye protection	Safety goggles	Eye protection protects the eyes from dust and other particles.	

TABLE 1: Types of PPE commonly used when working with or near asbestos

Your workers may need other types of PPE in addition to PPE for working with or near asbestos. The types of PPE your workers need to use will depend on the type of work they are doing.

You should engage with your workers when deciding on the most appropriate PPE for their tasks and working environment.

#### Who can provide PPE?

You must provide PPE to your workers if you are the PCBU that is directing the carrying out of work at a workplace (unless PPE has been provided by another PCBU).

If there is more than one PCBU with a duty to provide workers with PPE, you will need to consult with each other to make sure suitable arrangements are in place to provide that PPE.

Workers can choose to provide their own PPE, but only if they genuinely volunteer to do so for their own comfort or convenience. If a worker chooses to provide their own PPE, you must still make sure that the PPE will provide appropriate protection for the worker.

You cannot pass on the cost of providing PPE (in full or in part) to your workers.

#### Adding PPE allowances to workers' pay to cover PPE expenses is not recommended

It is not reasonable to expect a worker to keep money aside from each pay period for future PPE purchases. There is a risk that workers may wear PPE that is past its use-by date, especially if they have not accrued enough allowance to cover an expensive item.

#### **Providing replacement PPE**

PPE must be clean, hygienic, and in good working order. You must make sure that PPE is maintained, repaired, or replaced so that it continues to minimise risk to the worker that uses it.

You must replace PPE whenever it becomes worn out, no longer provides adequate protection, or is past its use-by date. Replacing PPE should be assessed based on need.

#### PPE must be fit-for-purpose

PPE must be suitable for the nature of the work and associated risks. It must also be a suitable size and fit so it is reasonably comfortable to wear.

#### Training your workers to use PPE

You must provide your workers with training on how to properly wear or use PPE, and how to store and maintain it. Training should be delivered by a competent person.

#### What is a competent person?

A competent person is someone who has the appropriate skills, training, knowledge, and experience to perform the task or role.

People that could be suitable to deliver training on the correct use of PPE might include:

- a health and safety consultant
- an experienced in-house worker, or
- a representative from the manufacturer of the PPE.

Train your workers before they start work. Training should include:

- what risks workers might be exposed to
- how each item of PPE works
- why workers should wear PPE
- when workers should wear PPE
- how to correctly put on and remove PPE
- how to make sure PPE fits properly
- how to clean, store, and maintain PPE
- how to dispose of PPE
- what to do if there is a problem with a worker's PPE.

New or inexperienced workers should be supervised in putting on and using PPE until they have shown they are competent to do so unsupervised.

Experienced workers may also need to be supervised in putting on and using PPE if changes are made to the PPE being used, or if they have not used the PPE recently.

You should review worker training regularly.

#### PPE for other people in the workplace

You must make sure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of your business or undertaking.

You must make sure that other people who may be in the workplace (for example, visitors) wear PPE that minimises risks to their health and safety.

You should be prepared to provide other people in the workplace with instructions or training about how to wear the PPE correctly. They must wear or use PPE in accordance with any information, training, or reasonable instruction you provide.

You can read more about other people in the workplace on the WorkSafe website What to know about 'other persons' at work

#### Manage any new risks that PPE might create

When you assess which PPE to use, think about what new risks it may create. Ask your workers for their views on how new risks could be eliminated or minimised.

Examples of risks that could be created from PPE include:

- heavy or thick clothing causing workers to overheat or affect their mobility
- boot covers causing workers to slip
- bulky masks reducing workers' ability to communicate or affecting their mobility in confined spaces

#### **Worker duties and PPE**

Workers have a duty to follow reasonable instructions and requirements regarding PPE, such as:

- what PPE should be worn and when to wear it
- how PPE should be cared for and stored.

Workers must tell their supervisor as soon as they notice any problems with their PPE (for example, if it does not fit properly or is broken).

# 3.0 Protective clothing for working with or near asbestos

#### Coveralls for working with or near asbestos

Coveralls are a type of protective clothing used to reduce the risk of exposure to asbestos fibres' when working with or near asbestos. They provide a barrier between a worker's body and potential hazards (for example, dust, fibres, and other contaminants).

#### Disposable coveralls

Disposable (or single use) coveralls are preferred for most work on or near asbestos (Figure 3).

You must make sure PPE used in asbestos removal or asbestos-related work is disposed of as asbestos waste when the work has been completed, so far as is reasonably practicable. This is why it is preferable to use disposable coveralls.

You can read more about disposing of asbestos waste in <u>Section 7.0: Disposing of</u> used equipment

Table 2 outlines examples of things you should consider when choosing suitable coveralls for asbestos work.

THINGS TO CONSIDER	GOOD PRACTICE		
Туре	Disposable coveralls should meet the minimum requirements for chemical protective clothing resistant to penetration by airborne solid particles (as described in Standard <i>Protective clothing for use against solid particulates BS EN ISO 13982-1</i> ).		
	Get disposable coveralls (for example, Type 5 disposable coveralls) to meet this standard.		
Quality	Disposable coveralls should be of a suitable quality to prevent tearing. Coveralls that are too thin are more likely to break at the seams.		
Comfort	Disposable coveralls must be reasonably comfortable for workers to wear.		
Fit	Disposable coveralls should be:		
	- fitted with an elasticated hood and elasticated cuffs		
	- one size bigger than the worker would normally wear to minimise the risk of tearing at the seams.		
	Disposal coveralls should be worn as follows:		
	- The fitted hood should be worn over the top of respirator straps and the arms of any eye protection.		
	- Leg cuffs should be worn over footwear (not tucked into footwear).		
	- Arm cuffs should be worn over the top of gloves.		
	- Loose elasticated cuffs should be sealed up with tape.		
Other considerations	Disposable coveralls should not have external pockets, Velcro fastenings, or other features that are difficult to decontaminate.		
	Waterproof disposable coveralls may be needed if the work is carried out outdoors.		

**TABLE 2:** Things to consider when choosing suitable disposable coveralls

#### Important

Your workers should never take used disposable coveralls home.

Used disposable coveralls must be disposed of as asbestos waste. They should never be reused.

#### **Reusable coveralls**

Reusable coveralls should only be used where necessary (for example, PPE for emergency services that needs to protect against fire as well as asbestos fibres).

You must make sure that reusable coveralls are maintained in good working order and decontaminated or disposed of to prevent asbestos fibres spreading.

#### Removing contaminated reusable coveralls from the worksite

Before contaminated reusable coveralls are removed from the worksite, make sure they are:

- stored in a sealed container that does not allow asbestos fibres to escape
- clearly marked as 'ASBESTOS CONTAMINATED CLOTHING'.

The coveralls should be dampened before being placed in the container.

You must ensure the outside of the container is decontaminated before it is removed from the area where asbestos work is being carried out.

#### Important

Contaminated reusable coveralls should never be laundered at a laundromat or by a worker in their home.

#### **Storing contaminated reusable coveralls**

If it is not reasonably practicable to dispose of contaminated reusable coveralls, they must:

- be kept in a sealed container that does not allow asbestos fibres to escape
- be clearly marked as 'ASBESTOS CONTAMINATED CLOTHING'
- be kept in the sealed container until they are reused for asbestos work.



FIGURE 3: Disposable coveralls with elasticated arm and leg cuffs

# 4.0 Hand protection for working with or near asbestos

#### Gloves for working with or near asbestos

Gloves create a protective barrier between a worker's hands and potential contaminants, such as dust, fibres, and other harmful substances.

They help to minimise the risk of asbestos fibres getting stuck under fingernails or getting into cuts and grazes, which can be difficult and painful to decontaminate.

#### Disposable gloves

Disposable gloves are recommended for most work with or near asbestos, especially if large amounts of asbestos fibres are present. You must make sure PPE used for asbestos removal or asbestos-related work is disposed of as asbestos waste when the work is completed, so far as is reasonably practicable. This is why it is preferable to use disposable gloves.

You can read more about disposing of asbestos waste in  $\underline{\text{Section 7.0: Disposing}}$  of used equipment

Table 3 outlines examples of things you should consider when choosing suitable hand protection for asbestos work.

THINGS TO CONSIDER	GOOD PRACTICE
Туре	Disposable gloves suitable for working with or near asbestos are usually made of latex, vinyl, or nitrile.
	Low protein (powder free) latex gloves may reduce the risk of workers developing a latex allergy or skin problems compared with standard latex gloves.
	Non-latex disposable gloves should always be provided to workers that have an allergy to latex.
Quality	Disposable gloves should be made of good quality material. Gloves that are too thin can be more likely to tear.
Fit	Disposable gloves should be reasonably easy to put on and take off. They should fit close to the hand.
	Arm cuffs of coveralls should be worn over the top of gloves, not tucked into the gloves.
Comfort	Gloves must be reasonably comfortable to wear - they should not be too tight.
	If they are too big, they can slip or make it hard to grip things.
	If they are too small, they can be uncomfortable to wear and could tear more easily.

TABLE 3: Things to consider when choosing suitable disposable gloves

#### **Important**

Your workers should never take disposable gloves home.

Used disposable gloves must be disposed of as asbestos waste. They should never be reused.

#### Reusable gloves

Reusable gloves should only be used where necessary (for example, if disposable gloves will not be durable enough for the work being carried out).

You must make sure that reusable gloves are maintained in good working order and decontaminated or disposed of to prevent asbestos fibres spreading.

#### Removing contaminated reusable gloves from the worksite

Before contaminated reusable gloves are removed from the worksite, make sure they are:

- kept in a sealed container that does not allow asbestos fibres to escape
- clearly marked as 'ASBESTOS CONTAMINATED CLOTHING'.

The gloves should be dampened before being placed in the container.

You must ensure the outside of the container is decontaminated before it is removed from the area where asbestos work is being carried out.

#### Important

Reusable gloves should never be laundered at a laundromat or by a worker in their home.

#### Storing contaminated reusable gloves

If it is not reasonably practicable to dispose of or decontaminate contaminated reusable gloves (for example, if reusable gloves will be kept in the work area), they must:

- be kept in a sealed container that does not allow asbestos fibres to escape
- be clearly marked as 'ASBESTOS CONTAMINATED CLOTHING'
- be kept in the sealed container until they are reused for asbestos work.

# 5.0 Foot protection for working with or near asbestos

#### Protective footwear for working with or near asbestos

Protective footwear is used to:

- provide a barrier between a worker's feet and potential contaminants
- protect a worker's feet from impacts (for example, things being dropped)
- provide improved grip for walking on slippery or uneven surfaces.

Table 4 outlines examples of things you should consider when choosing suitable foot protection for asbestos work.

THINGS TO CONSIDER	GOOD PRACTICE
Туре	Protective footwear that may be suitable for working with or near asbestos includes:  - gumboots  - steel-capped shoes  - rubber-soled shoes.  Gumboots are generally the best option because they do not have laces and can be easily
	decontaminated. You should select the most appropriate safety footwear for the work that is being carried out.
	Protective footwear used for working with or near asbestos should not have laces or eyelets. Laces and eyelets can easily become contaminated with asbestos fibres and are difficult to decontaminate.
Quality	Protective footwear should be made of good quality, durable material. Good quality protective footwear is less likely to split, break down, or lose comfort over time.
Fit	Protective footwear should fit in much the same way that a worker's normal shoes do. They should not be too tight or too loose.
	Footwear should have some space to allow for normal swelling of the feet and layers of insulation when needed (for example, thicker socks in cold weather or an insole to improve comfort).
	Leg cuffs of coveralls should be worn over the top of protective footwear, not tucked into the top of the footwear.
Comfort	Protective footwear must be reasonably comfortable to wear.
	Footwear that does not provide enough support can cause pain, blisters, and other foot problems.
	Each worker should have their own pair of protective footwear to minimise the risk of foot infections being spread.

TABLE 4: Things to consider when choosing suitable protective footwear

Protective footwear should be stored upside down when not in use to minimise the risk of asbestos contaminating the inside of shoes and boots. You should provide storage that allows footwear to be stored in this way.

You must ensure that protective footwear is maintained in good working order.

#### Disposable shoe covers

Disposable shoe covers are designed to fit over the top of shoes or boots to minimise contamination of shoes and boots (Figure 4). They should cover the whole shoe or boot, and should be secured above the ankle.

Disposable shoe covers should have an anti-slip sole design.

Contaminated disposable shoe covers must be disposed of as asbestos waste, so far as is reasonably practicable.

You can read more about disposing of asbestos waste in Section 7.0: Disposing of used equipment.



FIGURE 4: Gumboots (left) and disposable shoe covers covering gumboots (right)

#### **Important**

Your workers should never take disposable shoe covers home.

Used disposable shoe covers must be disposed of as asbestos waste. They should never be reused.

Leg cuffs of coveralls should be worn over the top of shoe covers. They should not be tucked into the top of shoe covers.

#### **Decontaminating reusable footwear**

If it is not reasonably practicable to dispose of contaminated reusable footwear as asbestos waste, the footwear must be decontaminated in a decontamination area.

Decontaminating footwear should include:

- vacuuming using a Class H vacuum cleaner with a brush attachment, and
- wiping with wet rags or wet wipes.

The contents of the Class H vacuum cleaner and any used rags and wipes must be disposed of as asbestos waste.

#### Storing contaminated reusable footwear

If it is not reasonably practicable to dispose of or decontaminate contaminated reusable footwear, they must:

- be kept in a sealed container that does not allow asbestos fibres to escape
- be clearly marked as 'ASBESTOS CONTAMINATED CLOTHING'
- be kept in the sealed container until they are reused for asbestos work.

### 6.0

## Respiratory protection for working with or near asbestos

#### Respiratory protective equipment

Respiratory protective equipment (RPE) helps to protect the wearer from inhaling harmful substances in the air. When working with or near asbestos, RPE can help to minimise the risk of workers breathing in asbestos fibres.

You must make sure that your workers wear appropriate RPE whenever they are working with or near asbestos. The greater the risk of exposure to asbestos, the higher the level of protection the RPE should provide.

#### Selecting the most appropriate RPE for the harmful substance

To determine the appropriate RPE to use, you need to know the harmful substances (including asbestos fibres) workers could be exposed to and the amounts. This information is needed to choose the most suitable type of RPE and filter(s) to use.

Appropriate RPE should be selected by a competent person that is knowledgeable of the working conditions and the limitations of RPE.

A safety equipment supplier, occupational hygienist, or consultant may be able to help you select the most suitable RPE for your work and workers. They may use information provided by RPE manufacturers or suppliers that can help in selecting the correct type of respirator and filter.

Your decision about the type of RPE suitable for your workers should be informed by your risk assessment. Your risk assessment should consider the amount of any harmful substances in the air, as well as their form (for example, fibres, particles, or vapour).

Asbestos may not be the only harmful substance your workers could be exposed to at work. Consider any other harmful substances when you carry out your risk assessment.

The RPE you select for your workers must provide protection from exposure to asbestos and any other harmful substances at work.

You can read more about assessing work risks on the WorkSafe website How to manage work risks

#### **Negative-pressure respirators**

Negative-pressure respirators use one or more filters to purify the air that is breathed in. Inhaling creates negative pressure, which draws contaminated air through the filter. Examples of negative-pressure respirators are shown in Figures 5–7.



**FIGURE 5:**Disposable half facepiece particulate P2 respirator



FIGURE 6: Half facepiece particulate respirator with P2 cartridges



**FIGURE 7:**Full facepiece respirator with cartridge

#### **Positive-pressure respirators**

Positive-pressure respirators use an independent supply of air that is suitable for breathing (for example, an air cylinder). They always maintain a positive pressure inside the facepiece. Examples of positive-pressure respirators are shown in Figures 8-10.

Positive-pressure respirators prevent contaminated air being inhaled even if there is a leak in the seal between the face and the facepiece (Table 5). They are generally used where the risk of asbestos exposure is high.

ТҮРЕ	HOW THEY WORK		
Powered air-purifying respirators (PAPRs) (Figure 8)	PAPRs use a battery-powered blower to draw air through the filters or cartridges and push it into the facepiece.		
Supplied-air respirators (SARs) or air-line respirators (Figure 9)	SARs (or air-line respirators) supply clean air from a tank of compressed air or through an air-line.		
Self-contained breathing apparatus (SCBA) (Figure 10)	SCBAs have their own air supply supplied from a high-pressure tank that is carried by the user.		

**TABLE 5:**Types of positive-pressure respirators



**FIGURE 8:** Powered air-purifying respirator



FIGURE 9: Supplied-air respirator



**FIGURE 10:**Self-contained breathing apparatus

WorkSafe must be notified of any work that involves a worker breathing compressed air, or anything other than air.

To notify WorkSafe of work that involves a worker breathing compressed air, use the <u>Notification tool</u> and select *Report particular hazardous work*.

#### **Filters**

The RPE you provide for your workers must have an appropriate filter. Particle filters are classified into three groups (Table 6).

TYPE	DETAILS
P1	P1 filters are also known as low efficiency filters. They are not recommended for work with or near asbestos because they cannot effectively filter asbestos particles.
P2	P2 filters are also known as medium efficiency filters. They stop up to 94% of airborne particles from being inhaled if they are used correctly. P2 filters do not provide the maximum protection for working with or near as
P3	P3 are also known as high efficiency filters. They stop up to 99.95% of airborne particles from being inhaled if they are used correctly. P3 filters provide the maximum protection for working with or on asbestos material. P3 filters should be used for licensed asbestos work.

**TABLE 6:**Classifications of RPE filters

You must ensure the filters you select for your workers to use:

- provide suitable protection for the work being carried out, and
- work effectively in the work conditions.

The length of time that a particulate filter can be used for work with or near asbestos depends on:

- the quality of the filter
- how well the filter is maintained
- how often the filter is being used
- the amount of particles the filter is filtering.

You should make sure that your workers replace filters if they are damaged, or if they notice a change in their ability to breathe easily.

There is no overall rule about when filters on respirators should be changed - each situation will be different. You should ask the manufacturer or a competent person when and how filters should be changed.

Filters should be maintained according to the manufacturer's instructions.

### Selecting the most appropriate RPE for the worker, task, and environment

As well as making sure the RPE you select is suitable to 'minimise the risk of workers breathing in asbestos fibres, you also need to make sure it is suitable for:

- the worker who will wear it
- the tasks the worker will be carrying out
- the environment the worker will be working in.

Table 7 provides examples of worker, task, and environment factors that should be considered when selecting RPE.

FACTOR	THINGS TO CONSIDER			
Intensity of work	- High intensity work activities can increase breathing and sweating, which can affect how well some RPE performs.			
	- Sweating can cause facepieces to slip and leak.			
	<ul> <li>Different workers may respond differently to work of the same intensity. For example, one worker may find a work activity to be medium intensity, while another may find the same activity to be high intensity.</li> </ul>			
Wear time	- Tight-fitting masks can become uncomfortable to wear for long periods.			
Temperature and humidity	- Wearing RPE in high temperatures or in humid conditions can increase heat stress, sweating, and discomfort.			
Facial hair	<ul> <li>Facial hair (including beards, moustaches, stubble, and sideburns) can affect how a mask seals to the face. Workers should be clean-shaven for RPE to be effective, if it requires a good face seal.</li> </ul>			
	- Workers who cannot shave should be provided with a suitable hooded respirator.			
Facial markings	- Facial markings (for example, scars, cuts, moles, and warts) can affect how a mask seals to the face.			
	<ul> <li>Workers with facial markings that prevent a mask from sealing to the face properly should be provided with a suitable hooded respirator.</li> </ul>			
Glasses and contact lenses	- Glasses with side arms are not compatible with some face masks because they can break the seal with the face.			
	- Some workers who wear contact lenses may find them uncomfortable if they are worn for long periods of time.			
	<ul> <li>If contact lenses move around or get stuck in the eye, the worker may need to remove the RPE quickly to replace them.</li> </ul>			
	- Eye glass hangers used in full face respirators may be suitable for some workers who cannot use contact lenses.			
	<ul> <li>Workers who cannot use a reasonable alternative to their glasses should be provided with a positive-pressure air supply hood.</li> </ul>			
Communication	- RPE can affect a worker's ability to communicate effectively with workers or other people around them.			
Mobility	- RPE with trailing hoses can snag on surfaces and be a tripping hazard.			
	- Bulky fan units and air cylinders can restrict a worker's ability to move around easily in tight spaces.			
Medical conditions	- Some medical conditions can make wearing RPE difficult for some workers. Examples include:			
	- chronic lung conditions (for example, asthma and chronic obstructive pulmonary disease)			
	- anxiety disorders (for example, claustrophobia and panic disorder)			
	- seasonal conditions (for example, colds and allergies)			
	- other conditions that affect breathing ability (for example, chronic sinusitis).			

**TABLE 7:** Examples of worker, task, and environment factors to consider when selecting RPE

#### Fit test

RPE is only effective if it fits properly and is used according to the manufacturer's guidelines. This includes positive-pressure systems (for example, PAPR or SARs). Tight fitting masks need to be fit tested in negative pressure mode. RPE should form a tight seal to the wearer's skin.

Facial differences mean that one kind of RPE is unlikely to fit all. These differences can be significant between people of different genders and of different ethnicities.

You should arrange for your workers to have a fit test for RPE before they start working with or near asbestos. Fit testing should be done in line with the recommendations set out in *Fit-testing procedures ISO 16975-3*. Consider contacting a specialist or

the supplier of the RPE to fit test your workers.

There are two types of fit testing:

- A quantitative fit test uses an instrument to measure the amount of air that leaks around the seal of RPE. This produces a result called a fit factor, which is a measure of how well the RPE fits the user.
- A qualitative fit test uses a harmless substance (usually an aerosol) that the
  wearer can smell or taste. If the wearer can smell or taste the substance while
  wearing the RPE, this suggests that the RPE does not fit correctly and is
  letting unfiltered air in.

Only quantitative fit testing provides objective, accurate, and reliable results.

Fit testing should be repeated:

- at least every year
- if a worker loses or gains weight
- if a worker has a change to their facial features (for example, after dental work or facial surgery).

#### Fit check

A fit check is a check to make sure that there is a good seal between the respirator and the face. You should make sure that your workers do a fit check each time a respirator is put on. Always follow the manufacturer's instructions when carrying out a fit check.

Figures 10 and 11 show the fit check procedures for negative-pressure respirators and positive-pressure respirators.

#### Negative-pressure fit check

- 1. Block the cartridges with the palms of your hands.
- 2. Gently breath in and hold for about 10 seconds.
- 3. Check to see if the facepiece is collapsing slightly.
- 4. If the facepiece stays collapsed and there are no more leaks between the face and facepiece, the respirator is properly fitted.
- 5. If leaks are detected, the straps of the respirator should be adjusted, and the fit check should be repeated.



**FIGURE 11:**Negative-pressure fit check procedure

#### Positive-pressure fit check

- 1. Block the exhalation valve with the palm of your hand.
- 2. Gently breath out and hold for about 10 seconds.
- 3. Check to see if the facepiece is bulging slightly.
- 4. If the facepiece stays bulging and there are no more leaks between the face and facepiece, the respirator is properly fitted.
- 5. If leaks are detected, the straps of the respirator should be adjusted, and the fit check should be repeated.



**FIGURE 12:** Positive-pressure fit check procedure

#### Hygiene and cleaning

You should make sure that each worker has their own RPE where practicable. Having individual RPE minimises the risk that respiratory infections (for example, COVID-19) will spread between your workers.

RPE should be labelled so it is easy to tell who it belongs to. This minimises the risk that a worker uses someone else's RPE.

If it is not reasonably practicable for each worker to have their own RPE, RPE should be disinfected after each use.

After use, RPE should be cleaned and stored in a sealable container in a safe place away from areas contaminated with asbestos. Follow the manufacturer's instructions for cleaning and storage.

#### Important

Never store clean RPE with contaminated RPE.

#### **Medical conditions**

If your workers are likely to wear RPE regularly, you should encourage them to have a medical assessment. A medical assessment can help to determine if:

- a worker is fit to wear RPE long-term, and
- a worker is fit to wear RPE for long periods at a time.

You should consider any medical conditions that your workers may have when you are deciding on the most appropriate RPE.

Positive-pressure RPE may be more suitable for workers that have medical conditions that make negative-pressure RPE difficult to use.

#### **Monitoring your RPE**

You should appoint a competent person to take responsibility for monitoring all aspects of the RPE you use to do your work.

We recommend you keep written records about your RPE. Records of RPE are sometimes called a respiratory protection programme.

Your respiratory protection programme should be reviewed regularly to check that your requirements are still being met. Keep track of any changes you make as a result of your reviews.

Monitoring should be documented in writing, and include:

- information about the risks your workers may be exposed to
- the information that has been used to select RPE for your workers
- records of RPE training for each worker
- records of fit testing for each worker
- information about fit testing procedures
- information about maintenance, cleaning, and decontamination processes
- information about replacement and repair processes
- information about how the monitoring process is audited.

# 7.0 Disposing of used equipment

All asbestos waste, including used disposable PPE, should be double bagged in heavy-duty (minimum 200 micron) plastic bags.

Twist the top of the bags tightly, fold the necks over (a 'gooseneck twist') and seal with adhesive tape so that the contents are fully enclosed (Figure 13). Clearly mark the bag as asbestos waste.

Asbestos waste can only be disposed of at authorised disposal sites. Check with your local authority on where these sites are and any requirements the sites may have.



FIGURE 13: Asbestos waste bag tied with a gooseneck twist

## 8.0 More information

For more information about the health risks of asbestos and the history of asbestos management in New Zealand see Asbestos in New Zealand

Notes		

#### Disclaimer

This publication provides general guidance. It is not possible for WorkSafe to address every situation that could occur in every workplace. This means that you will need to think about this guidance and how to apply it to your particular circumstances.

WorkSafe regularly reviews and revises guidance to ensure that it is up-to-date. If you are reading a printed copy of this guidance, please check <u>worksafe.govt.nz</u> to confirm that your copy is the current version.

ISBN 978-1-99-105723-5 (online)

Published: July 2024

PO Box 165, Wellington 6140, New Zealand

worksafe.govt.nz



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