



Australian Government

**National Occupational
Health and Safety Commission**

**CODE OF PRACTICE FOR THE SAFE REMOVAL OF
ASBESTOS
2ND Edition
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Asbestos Removalist Decontamination Procedure

- Establish a personal decontamination area;
- Wet down with water the entire disposable overalls boots and hood before removing them;
- Place the disposable overalls, boots and hood in an approved asbestos waste bag and seal with tape;
- Thoroughly wash clean the outside of the respirator with water;
- Remove the respirator;
- Thoroughly wash hands and face;
- Wash and rinse the inside of the respirator;
- Exit the personal decontamination area.

Organising a clean-up of a 'minor contamination'

In summary key steps are:

Step 1	Isolate the area and determine whether asbestos is present—you may need to assume that asbestos is present. Check the asbestos register (if any) for the workplace.
Step 2	Determine whether the contamination is minor—you will need to do a risk assessment for this—refer to the Code and any other guidance provided by your local OSH regulator. If unsure—hire a competent person to do the risk assessment or a Class A licensed asbestos removalist for the clean-up job.
If the ACD contamination is minor:	
Step 3	Organise the clean-up by following the Code. You can also check to see whether any additional guidance is provided by your local OSH Regulator. This includes: <ul style="list-style-type: none"> — collecting all cleaning items for example disposable cleaning rags, a bucket of water, 200 micron plastic sheeting, waste disposal bags, spare PPE warning signs and an asbestos vacuum cleaner (H Class HEPA filtered vacuum) if required — establishing the removal area and move all items out of the area or cover them with 200 micron plastic sheeting if they could be contaminated during the clean up — organising personal protective equipment (PPE) including disposable coveralls with hood and boots; use boots without laces as laced boots can be difficult to decontaminate, and — organising respiratory protection; the respiratory protection for this task is a disposable P1 or P2 respirator provided that a proper fit can be assured.
Step 4	Clean-up the minor contamination: <ul style="list-style-type: none"> — pick up any asbestos debris; use an industrial vacuum cleaner fitted with a H Class HEPA filter to collect the asbestos-contaminated dust and use damp cloths to wet wipe surfaces — place the waste into a 200 micron plastic waste bag or suitable alternate waste container dedicated for asbestos waste that is clearly labelled with an appropriate warning sign indicating asbestos waste, and — after all the debris and contaminated dust, used rags and waste have been placed in waste containers and all tools have been cleaned, begin the personal decontamination process.
Step 5	Carry out personal decontamination in a designated area. The method of personal decontamination may vary. For example: <ul style="list-style-type: none"> — clean the disposable coveralls and P1 respirator while still being worn; coveralls can be cleaned using a H Class HEPA vacuum, damp rag or fine water spray and the respirator can be cleaned with a wet rag or cloth — while the respirator is still being worn, remove coveralls turning them inside-out to entrap any remaining contamination and then place them into an asbestos waste bag. Remove the respirator and place it into an asbestos waste bag or waste container dedicated for asbestos waste.
Step 6	Visually inspect the area to ensure that all the dust and debris is removed.
Step 7	Dispose of the waste lawfully: <ul style="list-style-type: none"> — ensure all waste bags are goose-necked, the exterior cleaned then double bagged and all waste containers are sealed and labelled — place all waste containers in a secure storage facility or transport vehicle for disposal, and — transport and dispose of the waste in accordance with applicable environmental protection requirements.

Every Breath you take

The volume of a breath

The volume of one breath can vary a lot, but we are looking for an average to work with, which is the so called "tidal volume". Tidal volume is the lung volume representing the normal volume of air displaced between normal inspiration and expiration, without applying extra effort. A typical value would be about 500 ml, which is **half a litre**. If you want to know tidal volumes for yourself you can use an estimate of 7 ml/kg bodyweight.



The breathing frequency

The average breathing frequency (or respiratory rate) in a healthy adult at rest is 12-18 breaths per minute. This is of course a very rough estimate. Individuals that are not healthy, not at rest, or not adult, have different rates. So let's just pick a number for our calculation. We will work with **15 breaths per minute**. That's 900 breaths per hour, 21,600 breaths per day, or 7,889,400 breaths per year. Almost 8 million breaths per year for a healthy adult at rest.

Personal Protective Equipment required for Asbestos Removal

- Half of full face respirator with HEPA/P-100 Cartridges;
- Tyvec Coveralls;
- High Visibility Vest;
- Steel toe rubber boots;
- Leather or equivalent gloves;
- Hard Hat;
- Hearing Protection;
- Eye Protection.

'DOS and DON'TS' for handling asbestos materials

Before starting any work involving asbestos materials, you should assess the size and nature of the job, and your ability to complete the task.

Assess the number of sessions that will be necessary to complete the work remembering that breaks are taken throughout the day. You should then obtain enough suitable equipment to carry out the work. All the equipment described below (including personal protective equipment) should be available at all times that work is being performed.

All personnel other than those directly involved with the removal of asbestos must be kept away from the area whilst work is being performed.

Personal protective equipment

Wearing the right personal protective equipment is essential to protect your health when working with asbestos.

Wear an appropriate respirator

Ordinary dust masks are not effective in preventing the inhalation of asbestos fibres and dust. You should wear either a half-face filter respirator fitted with a class P1 or P2 filter cartridge, or a class P1 or P2 disposable respirator appropriate for asbestos. Respiratory protection devices should comply with Australian/New Zealand Standard 1716. This number will always be displayed on the mask.

To ensure that the respirator is effective, users should be clean-shaven, and the respirator should have a close fit to avoid air entering between the facial fit and the mask.



Half-face filter respirator



Twin-strap disposable P2 mask



Ordinary single-strap dust mask



Keep your respirator on until the work session has been completed, the cleaning is done, and your contaminated clothing has been removed, bagged and sealed. For the removal of asbestos cement material, a half-face disposable or cartridge-type particulate respirator class P1 or P2 is satisfactory. Respirators or masks should be worn continually by each person removing asbestos cement material.

Wear disposable clothing

Disposable coveralls should be used to prevent the contamination of clothing and footwear. An attached hood or disposable hat, and suitable disposable gloves should also be worn.

The coveralls should have no external pockets or velcro fastenings, and the gloves should be sufficiently robust for the work to be done. Smooth, nonslip footwear without laces or top fasteners are preferable to plastic overshoes where there is a risk of slipping.



When handling or removing asbestos cement products in general

DO

- work in a well-ventilated area and, where possible, in the open air (but not on windy days)
- thoroughly wet down the material before you start and regularly during the work by lightly spraying surfaces with water or a 1:10 polyvinyl acetate (PVA): water solution, or with low-pressure water from a garden hose (if outdoors); keep it wet until packaged for transport
- layers of polythene sheeting at least 0.2 mm thick (e.g. heavy-duty builders' plastic)
- minimise cutting or breaking of the asbestos cement products
- remove and dispose of personal protective equipment as described below
- shower and wash your hair immediately afterwards and, regardless of whether gloves were used, thoroughly clean your hands and fingernails to remove any dust and asbestos that may be on your body.

DON'T

- use high-pressure water jets to wet surfaces as this may increase the spread of loose fibres or dust
- slide one sheet over the surface of another as this may abrade the surface of the materials, and increase the likelihood of the release of fibres and dust
- walk on asbestos cement materials if it can be avoided —
- leave asbestos cement products around where they may be broken or crushed.

When working outdoors

DO

- inform your neighbours of the proposed work, and advise them to close doors and windows while the work is being undertaken;

- close all windows and doors of your home, and cover air vents to prevent asbestos fibres from entering the building;
- avoid contaminating the soil by covering the ground and vegetation with heavy-duty plastic sheeting to catch dust, debris and offcuts;
- remove play equipment, personal belongings and vehicles from the work area;
- keep household members, visitors and pets away until the work is completed (use barricades and signs if necessary);
- Thoroughly wet down the area before removal takes place to avoid fibres being released into the atmosphere.

DON'T

- work with asbestos on a windy day.

Cleaning up

DO

- thoroughly clean the work area, any tools and equipment as soon as possible after finishing the work
- clean up any asbestos cement residues in the work area, and on the tools and equipment used by using wet rags and a wet mop, or with a vacuum cleaner fitted with a high-efficiency particulate air (HEPA) filter which conforms to AS4260. Attachments with brushes should be avoided because they are difficult to decontaminate
- **double bag, seal** and dispose of any materials used during the decontamination, such as rags and mops, along with other asbestos products at a disposal facility licensed to take asbestos
- **keep dust, debris and offcuts damp with water**
- **keep your respirator on.**

DON'T

- remove any materials from the work area until cleaned up as described above
- leave asbestos cement products around where they may be broken or crushed.

Packaging and disposal of asbestos

DO

- **keep the material wet until it is packaged;**
- **carefully package the material, including any offcuts, in two layers of 0.2 mm thick polythene sheeting;**
- **keep the packages of a manageable size and completely seal them with adhesive tape;**
- **place smaller sized asbestos waste such as tiles, offcuts and dust in two 0.2 mm thick polythene bags (i.e. double bagged), then tie and seal for disposal with the other asbestos waste;**
- **only fill bags half full (to minimise the risk of splitting) and gently evacuate excess air in a way that does not cause the release of dust;**
- clearly label the packages 'ASBESTOS WASTE' using a permanent marker pen;

- as soon as possible, securely transport and dispose of the packages at a designated asbestos waste disposal site in your area (your local government or Environment Protection Authority will provide advice on where this is);
- alternatively, hire a special miniskip from a waste removal company to fill with your bagged asbestos waste and have it collected by the waste company

DON'T

- dispose of asbestos waste in a domestic garbage bin or rubbish skip;
- reuse or recycle asbestos waste;
- dispose of asbestos during council 'curbside rubbish' collections.

Removing and disposing of personal protective equipment

DO

- peel off coveralls, hat and gloves;
- immediately seal all these items in two 0.2 mm thick (heavy-duty) polythene bags (i.e. double bagged) and clearly label to identify the contents as described above in 'Packaging and disposal of asbestos';
- dispose of these bags with the other asbestos waste;
- wash or wipe reusable footwear using wet rags;
- leave the respirator on until the contaminated clothing is removed, bagged and sealed, then dispose of the respirator by doubling bagging it as described above.

DON'T

- keep or recycle disposable protective equipment; for example, don't attempt to shake the dust out of overalls or clean the items with a vacuum cleaner;
- launder or clean gloves — the asbestos removal and laundering process causes physical damage or deterioration of the gloves.