Guide to Asbestos Management

Asbestos awareness in building and construction industry

NTWorkSafe | NORTHERN TERRITORY GOVERNMENT

Disclaimer

This publication contains information regarding work health and safety. It includes some of your obligations under the Work Health and Safety (National Uniform Legislation) Act 2011 (WHS Act) – that NT WorkSafe administers. The information provided is a guide only and must be read in conjunction with the appropriate legislation to ensure you understand and comply with your legal obligations.

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Acronyms	Full form
AC	Asbestos Cement
ACM	Asbestos Containing Material
NATA	National Association of Testing Authorities
PPE	Personal Protective Equipment
WHS	Work Health and Safety

Contents

Introduction

This guide provides essential information for tradespeople and workers who may encounter asbestos, including where it is commonly found, the types of asbestos materials, safe handling procedures, and legal responsibilities.

Whether asbestos is being identified or removed, this guide outlines the necessary safety steps and protective measures to help reduce risk and ensure the safety of everyone on site.

Asbestos risks in building and construction

Trades and workers in the building and construction industry who may encounter asbestos from time to time include:

- bricklayers
- builders
- building construction and civil construction workers
- building maintenance workers
- carpenters and cabinet makers
- home handymen
- installers of external cladding
- joiners
- landscapers
- layers of floor covering and floor sanders (stripping carpets)
- painters and wallpaper hangers
- plumbers and drainers
- electricians
- roofers
- tilers
- fencers
- installers of solar panels
- installers of kitchens and bathrooms and those removing old kitchens and bathrooms.

Other trades at risk

Asbestos may also be encountered in home building and maintenance work by other trades, which include:

- landscapers (buried asbestos)
- heating and air conditioning installers and maintenance workers
- gas fitters
- roof and guttering installers
- telecommunications technicians (installing cabling)

- insulation installers
- demolition workers
- rubbish removalists (asbestos illegally placed in bins)
- waste disposal facility workers as green waste and recycling waste can sometimes contain asbestos

Types of asbestos building materials:

- Non-friable
- Friable

Non-friable Asbestos is any material (other than friable asbestos) that contains asbestos. Non-friable asbestos cannot be crumbled, pulverised or reduced to a powder by hand pressure when dry.

- products containing non-friable asbestos can be found anywhere! Common uses in residential buildings include asbestos cement (AC) sheeting (fibro) which may be flat or corrugated that was used internally and externally as roofing, fencing, wall and floor coverings, for water drainage and guttering, flue pipes and in wet or high temperature areas
- asbestos products don't need to be removed if sealed, in good, stable condition and left undisturbed, because they are unlikely to release dangerous fibres posing health risks, but it is highly recommended that it is removed due to the age of the product.

Friable Asbestos is any material containing asbestos in the form of a powder or can be crumbled, pulverised or reduced to powder by hand pressure when dry.

- friable asbestos was mainly used in industrial applications but non-friable asbestos can become friable if damaged, unsealed, burnt and exposed to weather
- ONLY Class A Licenced Asbestos Removalists can remove friable asbestos.

What is an asbestos register?

An asbestos register is a safety management document used in business that details the location, type, condition, and date when all asbestos and materials containing asbestos are identified.

If conducting works on a commercial premises, request the asbestos register from the business. The work health and safety (WHS) regulations 427 requires a commercial property to have an asbestos register to be available if the building was built before 2004. The register documents where the asbestos is within the premises.

Location of asbestos

Internal:

- walls and ceilings: splashbacks in wet areas
- silicon aluminium window seals: textured paint (behind wall tiles)
- packing under beams: vinyl, carpet, tile underlay and glue

External:

- roofing and gutters
- imitation brick cladding

- electrical meter backing boards
- gables and eaves
- downpipes
- fencing
- telecommunication pits
- expansion joints
- putty in wooden window frames

Industrial use of asbestos

The fire resistance and insulation properties of asbestos meant it was widely used in industrial equipment. Asbestos can be found in the following older mechanical equipment.

- boilers (used in insulation)
- turbines (used in insulation)
- generators (used in fire protection)
- pumps (used in gaskets and packing)
- Furnaces (used in lining, gaskets and insulation)

Identifying asbestos

It is strongly recommended that a competent person collects the samples for testing and all testing is done by a National Association of Testing Authorities (NATA) accredited laboratory.

A competent person in the identification of asbestos and asbestos containing material (ACM) include:

- occupational hygienists who have experience with asbestos and ACM
- licensed asbestos assessors
- asbestos removal supervisors
- individuals who have a statement of attainment in the Vocational Education and Training course for asbestos assessors
- a person working for an organisation accredited by the NATA to survey asbestos.

A list of asbestos assessors and businesses licensed to remove asbestos are available on the NT WorkSafe website.

Asbestos related work

Before commencing any work, renovations or refurbishments to residential or commercial properties, Tradies and workers must determine if asbestos containing materials are present to ensure they minimise the risks to their health and the health of colleagues, families and bystanders.

The removal of less than 10 square metres of non-friable asbestos can be performed by a non-licenced worker if the worker has had at a minimum, asbestos awareness training as per WHS regulation 445.

Certain equipment or tools cannot be used in the removal of asbestos or asbestos related work as per WHS Regulation 446. These are:

- high – pressure water spray
- compressed air
- power tools
- brooms
- any other implements that cause the release of airborne asbestos into the atmosphere.

When undertaking asbestos-related work activities, the employer must ensure that the work is only performed in accordance with the following requirements:

- any worker undertaking asbestos-related work must be informed of the health risks of exposure to asbestos and ensure that a competent person carries out air monitoring of the work area where asbestos-related work is being carried out if there is uncertainty as to whether the exposure standard is likely to be exceeded
- any asbestos that may be encountered by workers undertaking asbestos-related work must be identified, and if it is not possible to identify, it must be assumed asbestos is present
- wear personal protective equipment (PPE)
- ensure dust is minimised
- the area in which asbestos-related work is undertaken is separate from the rest of the workplace, reasonably practicable
- the asbestos work area must be signed and barricaded to ensure that other workers do not enter the area
- facilities must be provided to allow for the decontamination of workers, equipment and the items worked upon
- anything removed from the work area must be decontaminated before it is removed from the work area
- if material contaminated with asbestos is to be removed from the work area, it must be sealed within a container, or asbestos labelled heavy duty polyethylene bags (minimum 200 µm thickness) to indicate the presence of the asbestos and disposed of at a licensed waste disposal facility as soon as is practicable
- PPE used in asbestos-related work is to be removed from the work area for disposal, it also must be sealed within a container, or an asbestos labelled heavy duty polyethylene bags (minimum 200 µm thickness)
- the waste must be disposed of accordingly, check with council for locations that accept asbestos waste. NEVER PUT IN THE BIN. Shoal Bay, Alice Springs, and Nhulunbuy waste management facilities.

Personal protective equipment (PPE)

You must use the following PPE during removal work:

- respiratory protective equipment
- gloves
- footwear
- coveralls

Asbestos Kit

Equipment checklist ensure your PPE kit includes all items listed here.

- PPE as above
- plastic 200 µm in rolls for covering areas in the work space
- duct tape for sealing bags and securely joining pieces of plastic from rolls
- wet wipes (preferred) or disposable cloths for decontaminating the area after the job is complete
- bucket for wetting disposable cloths when decontaminating the area
- water sprayer (hose or bottle) for wetting down asbestos materials
- sealant (PVA glue) to mix 1 part per 5 parts with water to seal edges
- non-electrical tools for removal of fixings and materials if required
- access to water
- heavy duty polyethylene bags (minimum 200 µm thickness) to contain and seal in asbestos materials. These should be made of 200 µm (0.2mm) virgin plastic and be labelled/marked as 'ASBESTOS WASTE'. If bags are unavailable, use 200 µm virgin plastic in rolls and label/mark as 'ASBESTOS WASTE'
- shaving cream and disposable cups for drilling into asbestos – see code of practice -how to manage and control asbestos in the workplace – appendix 2.

If you must take samples yourself.

Although it is not recommended, if you decide to take a sample yourself, it is important that you do it safely to make sure that you do not expose yourself or others to asbestos fibres.

If you are considering taking an asbestos sample yourself, the Asbestos Safety and Eradication Agency recommends the following steps.

Equipment you will need:

- pliers
- re-sealable heavy duty polyethylene bags (minimum 200 µm thickness)
- disposable coveralls
- waterproof sealant or PVA glue
- plastic drop sheets
- 200 µm (0.2mm) thick plastic waste bag
- water spray bottle
- detergent
- sticky tape
- P2 respirator and rubber gloves
- rags for clean up

The required equipment should be available at your local hardware store.

Step 1: Preparation

- before taking a sample, find an NATA accredited laboratory. Contact the laboratory for advice on how to transport your samples for testing
- shut down any heating or cooling systems. This will minimise the spread of any fibres that might be released
- if you are inside, turn off any fans. If you are outside, make sure samples are not taken on a windy day
- make sure no one else is around when taking the sample.

Step 2: Taking the sample

- wear disposable gloves, a P2 respirator and disposable coveralls
- lay down a plastic drop sheet to catch any loose material that may fall off while taking the sample
- fill the water spray bottle with water and add a few drops of detergent
- use the spray bottle and set it to a fine mist to wet the material that you are taking a sample from. The mist will reduce the release of fibres
- use the pliers to carefully cut a thumb-nail sized piece from the entire depth of the material that you are taking the sample from. Make sure to only take a small sample. Do not disturb the material any more than is needed
- for fibre cement sheeting, take the sample from a corner edge or along an existing hole or crack
- place the small piece into a re-sealable heavy duty polyethylene bags (minimum 200 µm thickness). Double bag the sample and place a label in a clear position with the date, location and any other information that may be useful to the laboratory. Use a label that will not wash or fall off
- use a damp rag to clean up any material around the area that the sample was taken from
- wipe once with each rag before disposing as ACM.

Step 3: Cleaning up

- seal the edges where the sample was taken by painting them with waterproof sealant (such as plastic paint or using a mixture of PVA glue and water with a ratio of 1:10)
- carefully wrap the plastic drop sheet and secure it with tape. Place this in a 200 µm (0.2mm) thick plastic waste bag
- wipe down all tools and equipment used with a damp rag
- place the disposable gloves, coveralls, and damp rag into the heavy duty polyethylene bags (minimum 200 µm thickness) with the drop sheet and seal accordingly
- place the sealed bag inside another bag and seal
- mark the outer bag as containing asbestos waste and dispose it at a licensed asbestos waste facility
- only remove your respirator once the entire clean-up process has been completed
- shower and wash your hair, hands and fingernails to remove any residual fibres
- arrange for the transportation of samples to the laboratory as per the laboratory's advice.

For further information, refer to How to manage and control asbestos in the workplace and How to safely remove asbestos Code of Practice available at worksafe.nt.gov.au/codes-of-practice.

Appendix 1

Asbestos materials

Image 1: Asbestos packer

Image 2: Asbestos bollard

Image 3: Asbestos sheeting under tiles

Image 4: Asbestos eaves wrongly cut

Image 5: Asbestos in meter box

Image 6: Asbestos louvers

Image 7: Asbestos paper underlay

Image 8: Asbestos pipe insulation

Image 9: Asbestos pipes

Image 10: Asbestos sheeting

Image 11: Asbestos coating under ceiling

Image 12: Asbestos wall cladding

Image 13: Asbestos zelemite in meter box

Image 14: Asbestos backing board

Image 15: Asbestos joint gap sealer

Image 16: Legacy asbestos in tree roots

Image 17: Asbestos super six fencing

Image 18: Unearthed asbestos debris

Image 19: Asbestos tile and blackjack glue

Image 20: Asbestos tiles and blackjack glue hidden under built in furniture

Image 21: Asbestos backed vinyl tiles under Asbestos sheets

Image 22: Asbestos backing on urinal

Image 23: Black sound deadening paint behind urinal

Image 24: Asbestos ceiling panel

Image 25: Asbestos expansion joint sealants

Image 26: Asbestos panels and eaves

Image 27: Asbestos vinyl sheeting

Image 28: Asbestos rope in floor penetration

Image 29: Asbestos rope in floor penetration

Image 30: Asbestos blackjack glue

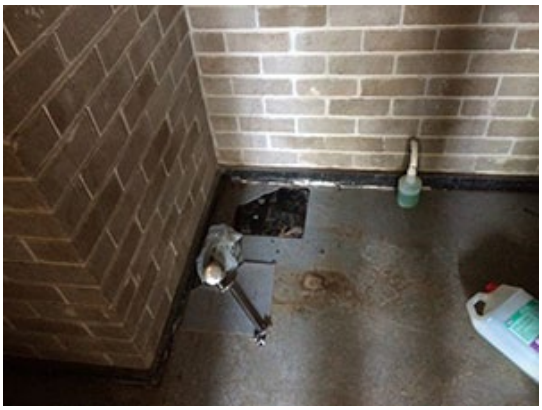

Image 31: Asbestos blackjack glue under tiles

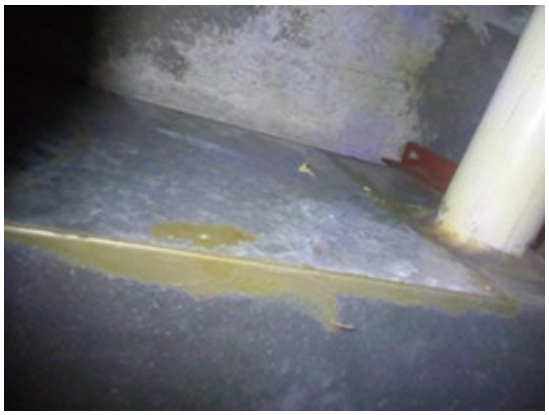

Image 32: Brown asbestos

Image 33: Asbestos louvers

Image 34: Expansion Joint sealants

Image 35: Asbestos piping

Image 36: Asbestos within fire door

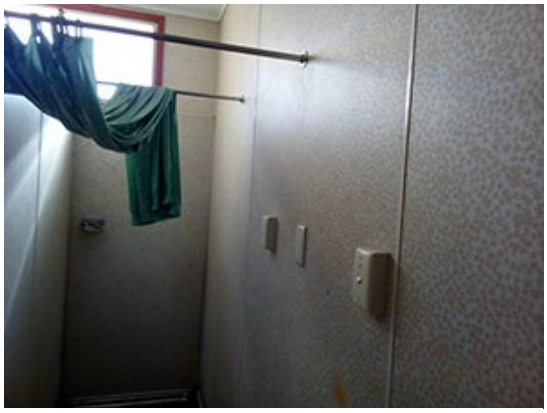

Image 36: Hardie tilux versilux bathroom wall sheeting

Image 38: Low density fibre board

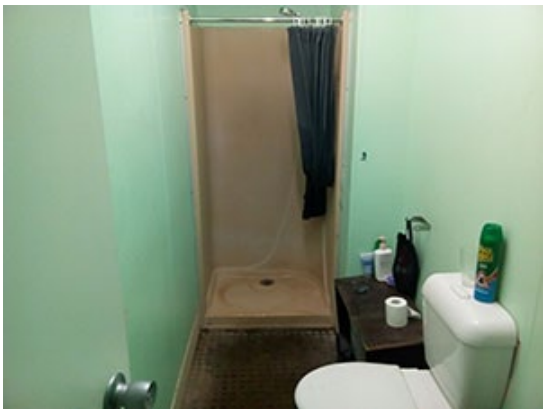

Image 39: Moulded shower base plate

Image 40: Pipe sound insulation

Image 41: Asbestos refrigeration panel ceiling and walls

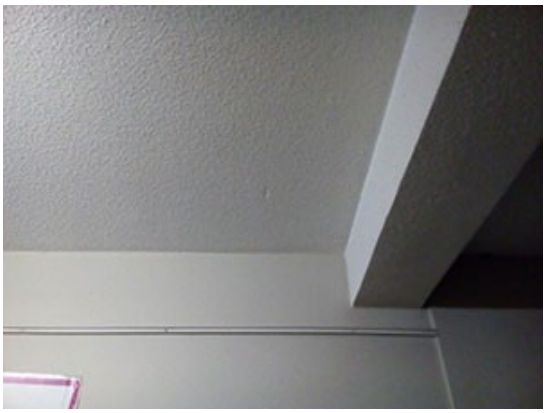

Image 42: Textured ceiling coatings

Image 43: Toilet cubicle partitions

Image 44: Toilet cubicle partitions

Image 45: Window infill panels

Appendix 2

If you must take samples yourself

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Equipment you will need:

- pliers
- re-sealable heavy duty polyethylene bags (minimum 200 µm thickness)
- disposable coveralls
- waterproof sealant or PVA glue
- plastic drop sheets
- 200 µm (0.2mm) thick plastic waste bag
- water spray bottle
- detergent
- sticky tape
- P2 respirator and rubber gloves
- rags for clean up

The required equipment should be available at your local hardware store.

Step 1: Preparation

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- shut down any heating or cooling systems. This will minimise the spread of any fibres that might be released
- if you are inside, turn off any fans. If you are outside, make sure samples are not taken on a windy day
- make sure no one else is around when taking the sample.

Step 2: Taking the sample

- wear disposable gloves, a P2 respirator and disposable coveralls
- lay down a plastic drop sheet to catch any loose material that may fall off while taking the sample
- fill the water spray bottle with water and add a few drops of detergent
- use the spray bottle and set it to a fine mist to wet the material that you are taking a sample from. The mist will reduce the release of fibres
- use the pliers to carefully cut a thumb-nail sized piece from the entire depth of the material that you are taking the sample from. Make sure to only take a small sample. Do not disturb the material any more than is needed

- for fibre cement sheeting, take the sample from a corner edge or along an existing hole or crack
- Place the small piece into a re-sealable heavy duty polyethylene bags (minimum 200 µm thickness). Double bag the sample and place a label in a clear position with the date, location and any other information that may be useful to the laboratory. Use a label that will not wash or fall off
- use a damp rag to clean up any material around the area that the sample was taken from
- wipe once with each rag before disposing as ACM.

Step 3: Cleaning up

- seal the edges where the sample was taken by painting them with waterproof sealant (such as plastic paint or using a mixture of PVA glue and water with a ratio of (1:5)
- carefully wrap the plastic drop sheet and secure it with tape. Place this in a 200 µm (0.2mm) thick plastic waste bag
- wipe down all tools and equipment used with a damp rag
- place the disposable gloves, coveralls, and damp rag into the heavy duty polyethylene bags (minimum 200 µm thickness) with the drop sheet and seal accordingly
- place the sealed bag inside another bag and seal
- mark the outer bag as containing asbestos waste and dispose it at a licensed asbestos waste facility
- only remove your respirator once the entire clean-up process has been completed
- shower and wash your hair, hands and fingernails to remove any residual fibres
- arrange for the transportation of samples to the laboratory as per the laboratory's advice.

Appendix 3

Steps to follow to remove asbestos

Step 1: Get the right equipment

- personal protective equipment (PPE) – disposable coveralls, disposable gloves, a tight fitting Class P2 respirator and fully enclosed shoes without laces that can be easily cleaned
- heavy duty polyethylene sheeting (minimum 200 µm thickness) and duct tape
- warning notices and barricades
- bolt cutters (for sheets bolted in place)
- access to a garden hose with a fine spray nozzle or a spray bottle containing a wetting agent (water, or water with detergent)
- bucket of water and disposable rags
- solid asbestos-waste container, labelled appropriately
- asbestos waste bags (new, labelled, 200 µm thick polythene plastic)
- class H vacuum cleaner with high efficiency particulate air (HEPA) filters for cleaning up dust.

Step 2: Plan and prepare the work area

- assess all the risks associated with the removal and document how you will carry out the work (e.g. as part of a Safe Work Method Statement)
- assemble PPE, removal equipment and tools (NO power tools) including materials for waste containment and disposal
- identify an asbestos disposal facility, their opening hours and their requirements for asbestos disposal
- check the environmental laws for asbestos transport requirements
- check the weather for outdoor work – windy days will spread any asbestos dust so reschedule
- prepare the work area –
    - remove any portable electrical or gas items
    - cover all electrical or gas outlets with taped plastic NOTE: water used to wet down the area may cause an electrocution hazard
    - shut off the electricity or seek help from an electrician
    - isolate the area and limit access by erecting signs and barriers and tell others to avoid the area
    - cover all vents and turn off air-conditioning and fans
    - clear the area of personal belongings, soft furnishing and anything that may become contaminated
    - cover the floor or ground with new, heavy-duty 200 µm polythene heavy duty polyethylene sheeting (minimum 200 µm thickness)
- prepare a clean area with all the equipment you need for the job and a dirty area with all the rags and wipes you need for decontamination

- prepare a storage area for waste – a trailer or skip that can be covered for transport and disposal

Step 3: Remove the asbestos safely

- thoroughly wet down the material before you start and at regular intervals during the removal process by lightly spraying surfaces with water, or with water mixed with detergent, or with a PVA solution. Use water from a low-pressure garden hose if working outdoors
- if sheets are bolted in place, dampen and cut the bolts while avoiding contact with the asbestos material. Remove the bolts or fixings slowly without damaging the asbestos and place them in the asbestos-waste container
- unbolt or use bolt cutters to release gutters, drain pipes and ridge caps
- carefully lower large pieces of asbestos material to the ground – do not drop them or put them in rubble chutes
- stack asbestos-cement sheets carefully on the heavy duty polyethylene sheeting (minimum 200 µm thickness) so they do not break
- place small pieces of asbestos debris in an asbestos-waste container
- double-wrap large pieces of asbestos material in heavy duty polyethylene sheeting (minimum 200 µm thickness) and seal all openings securely with duct tape
- label all wrapped or bagged asbestos waste.

Step 4: Decontaminate

Decontamination of the work area and tools can be done in two ways:

- Wet decontamination (or 'wet wiping') uses disposable rags to wipe contaminated surfaces. Rags must not be re-wetted in the bucket or the water will be considered contaminated and therefore becomes asbestos waste. All used rags are asbestos-contaminated waste.
- Dry decontamination involves rolling/folding up and sealing contaminated sheeting or using an asbestos-grade Class H HEPA filtered vacuum cleaner. Tools that are used in an asbestos area must be either:
    - disposed of as asbestos-contaminated waste, or
    - decontaminated, double-bagged and labelled for transport to another asbestos area.

Before any PPE is removed, it should be thoroughly vacuumed and also wet wiped in the case of footwear. Remove the respirator last and dispose with other asbestos waste.

Full details on how to decontaminate are described in your state/territory's Code of Practice for asbestos removal. Once the asbestos material has been removed, inspect the whole work area to ensure it has been cleaned properly and there is no visible sign of asbestos waste.

Step 5: Dispose of asbestos waste legally

All asbestos waste must be disposed of safely. This includes:

- materials containing asbestos that have been removed and contained in bags or sheets
- all PPE and clothing, clean-up rags and anything else contaminated with asbestos.

You must:

- keep the asbestos material wet until it is wrapped and sealed, or bagged

- wrap the material (including any offcuts or contaminated items) in two layers of 200 µm heavy duty polyethylene sheeting (minimum 200 µm thickness) or double-bag in asbestos waste bags
- only half-fill the bags and sheets to leave enough room to seal the waste (eg. to goose-neck the bags)
- completely seal the packages with adhesive tap
- put asbestos warning stickers on the outside of the packages or bags, or clearly label the packages or bags ASBESTOS WASTE using a permanent marker pen
- store packaged asbestos waste in a solid, secure and clearly labelled waste bin or skip until removed
- ensure the packaged asbestos waste is transported securely and disposed at a designated asbestos-waste disposal facility as soon as possible after removal.