



Delivering a **Healthy WA**



Asbestos Cement Products in the Home Environmental Health Guide

What is Asbestos?

Asbestos is a naturally occurring fibrous crystalline mineral, found in rock formations. Three main types of asbestos have been mined in Australia, including crocidolite (blue asbestos), amosite (brown asbestos) and chrysotile (white asbestos).

After mining, the mineral was further processed by breaking down clumps of fibres into groups of loose fibres. It was mixed with other materials to produce a variety of products.

Asbestos cement was produced by mixing asbestos fibres with Portland cement and water. The asbestos fibre was added as reinforcement, to increase the strength of the product. Asbestos cement products typically contain 10 - 15 percent asbestos fibre by weight.

When was Asbestos Used?

Asbestos cement products were commonly manufactured in WA from 1921 to 1987. The use of crocidolite ceased in 1966. Most uses of amosite ceased in May 1984.

The use of chrysotile asbestos was phased out between 1981 and 1987. Manufacturing of all asbestos products ceased in 1987.

Where Can You Find Asbestos in The Home?

Asbestos was commonly used in building materials due to its durability, fire resistance and insulation properties.

Asbestos fibres may be present in a number of products previously used in the Australian building industry including:

- Roofing, shingles and siding
- Exterior wall cladding
- Fencing
- Thermal boards around fireplaces
- Backing material on floor tiles and vinyl flooring
- Gaskets in wood stoves
- Textured paints
- Water or flue pipes
- Roofing insulation (not used in Western Australian homes)
- Insulation used on hot water pipes, domestic heaters and stoves



How do You Recognise Asbestos Products?

Generally, a person cannot determine whether a material contains asbestos simply by looking at it. Careful visual examination and the use of a microscope is the only way to verify the presence of asbestos. If in doubt, treat suspect material as though it does contain asbestos. In its raw form, asbestos is well known to cause health effects in humans.

What are the Health Effects Caused by Exposure to Asbestos?

Exposure to asbestos fibres can cause the following diseases:

- Asbestosis
- Pleural Plaque
- Lung Cancer
- Mesothelioma

The risk of developing and asbestos related disease depends on the total number of fibres inhaled.

To date, the majority of people who have developed asbestos related diseases have been exposed to relatively large numbers of fibres, as a result of contact with the material in their occupation.

What are the Health Effects Caused by Exposure to Asbestos Cement Products?

Generally, undisturbed asbestos cement products do not pose a health risk, as the fibres are bound together in a solid cement matrix.

However, if the material is damaged or disturbed, fibres may be released into the air. The use of power tools for cutting, drilling, grinding, sanding, or sawing the material can release significant numbers of fibres. The use of high pressure water blasters to clean the material prior to painting can also release large numbers of fibres. These activities must not be performed.

The risk of developing an asbestos related disease from working with asbestos cement material depends on the nature of the activity and the number of airborne fibres it produces. This in turn determines the total number of fibres inhaled.

The natural ageing and weathering of asbestos cement roofs may release a very small number of fibres into the air over time. These are unlikely to pose a risk to health.

In most cases, the presence of asbestos cement building materials in a home is no cause for alarm. If the materials are in good condition and are not disturbed, they do not present a health hazard. Disturbing the material (e.g.: by removal) may create a health hazard where none previously existed.

Coating Asbestos Cement Products

It is not necessary to coat asbestos cement products on health grounds.

However, the application of a surface coating may extend the structural life of the products, and improve their appearance.

Paints may be used to coat unweathered surfaces, such as internal walls. However, sealants should be used on weathered products, such as roofs, as they are capable of penetrating the surface of the product and binding the asbestos fibres to the lower cement layers.

Choose a product that is specifically designed for use on asbestos cement material, that can provide a life of 10 years or more, and can be easily over-coated without the need to remove the lower layers.

The coating must not require the asbestos cement to be vigorously cleaned before it is applied. If cleaning is necessary (e.g. to remove dead moss and algae) a surface biocide can be applied, then removed using water and gentle brushing with a soft bristled brush. During this procedure, the material must be kept wet at all times.



Sanding, scraping or the use of high pressure water blasters and stiff brooms to clean asbestos cement products can release significant numbers of fibres. These practices must be avoided..

To prepare painted asbestos cement surfaces for recoating, lightly wet scrub the existing paint with an appropriate abrasive, taking care not to scrub through the paint surface. The surface should be kept wet at all times throughout the procedure.

Renovating Buildings Containing Asbestos Cement Products

Special precautions should be taken when renovating buildings containing asbestos cement products, to prevent fibres entering the atmosphere.

As far as practicable, asbestos cement material must not be broken, abraded or otherwise disturbed.

If it is necessary to cut holes in asbestos, cement material, only non-powered hand tools may be used, or power tools that incorporate dust suppression or dust extraction equipment attachments that are specifically designed to collect asbestos fibres.

The material should be kept wet, or other practical measures taken to keep the creation of airborne fibres to a minimum.

Suitable personal protective equipment should be worn including:

- P1 or P2 respirator
- Disposable coveralls
- Safety goggles
- Disposable gloves

Any debris must be cleaned up using a wet mop, or a vacuum cleaner fitted with a HEPA filter. Do not use dusting, sweeping or brushing methods to clean up.

If significant cutting or abrasion of the material is required, the asbestos cement material should be removed, and replaced with non-asbestos materials. If in doubt, seek advice from a building consultant.

All work performed by contractors must comply with the requirements of the Occupational Safety and Health Act 1984 and Regulations. Details of these requirements can be obtained from the WorkSafe Division of the Department of Consumer and Employment Protection.

How to Safely Remove and Dispose of Asbestos Cement Products

Special precautions must be taken when removing asbestos cement products. You may seek the services of an asbestos removal contractor, or you may choose to remove the material yourself. Contractors must comply with the requirements of the Occupational Safety and Health Act 1984 and Regulations.

If you choose to remove the material yourself, you are required to comply with the Health (Asbestos) Regulations 1992. You should take the following precautions:

1. Remove all movable furniture and fittings from the room
2. turn off heating/air conditioning systems
3. isolate the area and prevent access to members of the family, visitors etc
4. Wear suitable personal protective equipment:
 - P1 or P2 respirator
 - Disposable coveralls
 - Safety goggles
 - Disposable gloves



5. Prior to removal gently spray the asbestos cement with water or a PVA (poly vinyl acetate) solution, to minimise the creation of airborne dust. Beware that an Asbestos Cement roof can be slippery when wet.
6. Remove all the asbestos cement products with minimal breakage. Do not use excess force. Only use non-powered hand tools.
7. Stack the asbestos cement sheets on 0.2mm thick polythene (plastic) sheeting. To prevent releasing fibres, avoid sliding the sheets together. Wrap the plastic around the material and seal it into bundles.
8. Small pieces of asbestos cement can be collected in heavy duty polyethylene bags, approximately 0.2mm thick. Bags should be filled to no more than 50 percent capacity.
9. Label or mark the bundles with the words "CAUTION ASBESTOS" in lettering at least 40mm high.
10. Clean up any residue material using a wet mop or a vacuum cleaner fitted with a HEPA filter. Do not use an ordinary household vacuum cleaner.
11. Dispose of asbestos material at an approved landfill site. A list of approved sites can be obtained from the Department of Environmental Protection or the Department of Health. You must inform the operator of the site that the waste is or contains asbestos on arrival.

Removing Asbestos Cement Fences

When removing asbestos cement fence sheeting, it is important to ensure that all of the material is removed, including the below ground section. Dig a trench around the fence, making sure you do not dig into the fence and break up the material. Remove the entire sheet, wrap it in labelled polythene sheeting, and dispose of promptly.

Further Steps You Must Follow When Removing Vinyl Flooring

The Department of Health recommends that you seek the services of an approved asbestos removal contractor when removing vinyl flooring.

Where practicable floor surfaces should be left in place and covered with non-asbestos containing finishes. When it is necessary to remove the floor surfaces the following steps should be taken:

1. Make a series of parallel cuts, approximately 20cm apart, across the entire floor surface, cutting through the top layer and through the backing using a blade.
2. Prise up the corner of the end strip using a stiff blade scraper and gently spray with water mixed with detergent as work progresses. Roll and dispense of one strip at a time. Continue in a systematic manner across the floor surface, placing removed sections into labelled polythene sheeting or asbestos waste bags without delay.
3. Removal may also be assisted by thoroughly heating the floor/wall covering using a hot air gun to penetrate through the material and soften the adhesive. Caution: Excessive application of heat may give rise to toxic fumes from some vinyl floor/wall surfaces. Good ventilation and/or additional respiratory protection may become necessary.
4. Residual adhesive materials and/or backing may also need to be scraped or cut back. Water sprays should again be used. If solvents are required to remove stubborn sections then use sparingly and do not apply as a spray. Ensure good ventilation and/or wear an appropriate respirator fitted with organic vapour filters. Work in cool atmospheric conditions if possible, and ensure that electrical appliances and heat sources are first removed from the work area.
5. If wet, allow the underlying floor surface to dry, then thoroughly vacuum with the HEPA vacuum cleaner. Used HEPA filters and disposable attachments should be treated as asbestos contaminated waste and disposed of promptly into labelled asbestos waste bags.

How to Maintain an Asbestos Cement Roof

Asbestos cement roofs should be regularly maintained using the following procedures:

1. Inspect asbestos cement roofs regularly for signs of deterioration and damage.



2. Clean gutters and drains annually by thoroughly wetting the waste material and collecting it in heavy duty plastic bags for disposal at a landfill accepting asbestos waste.
3. Prune all trees and branches 600mm away from asbestos cement roofing.
4. Do not clean the roof unless absolutely necessary. If cleaning is necessary (e.g. to remove dead moss and algae) a surface biocide can be applied, then removed using water and gentle bushing (with a soft bristled brush). During this procedure, the material must be kept wet at all times.

CAUTION: An asbestos Cement roof can be very slippery when wet.

Health (Asbestos) Regulations 1992

The *Health (Asbestos) Regulations 1992* make it an offence to sell, give away or supply second-hand asbestos material.

The regulations also control the handling and use of materials containing asbestos, to protect the public from the uncontrolled release of fibres into the environment.

Remember

You must take all reasonable measures to ensure asbestos fibres are not released into the air.

Further Information

For a list of analytical laboratories that test asbestos material look in the yellow pages

or

for advice on asbestos removal, contact your local Environmental Health Officer

or

Environmental Health Directorate
Department of Health
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