

ASBESTOS AWARENESS



Naturally occurring asbestos (NOA) contained in Serpentine rock with Chrysotile fibres.



What is asbestos?

- Most widely used types were: crocidolite (blue), amosite (brown) and chrysotile (white).
- Mining of all forms ceased in Australia in 1983 & manufacturing in 1986.
- Total ban on use of asbestos in Australia did not come into effect until December 2003.
- Asbestos is still used in many countries, particularly throughout Asia, and other developing countries.



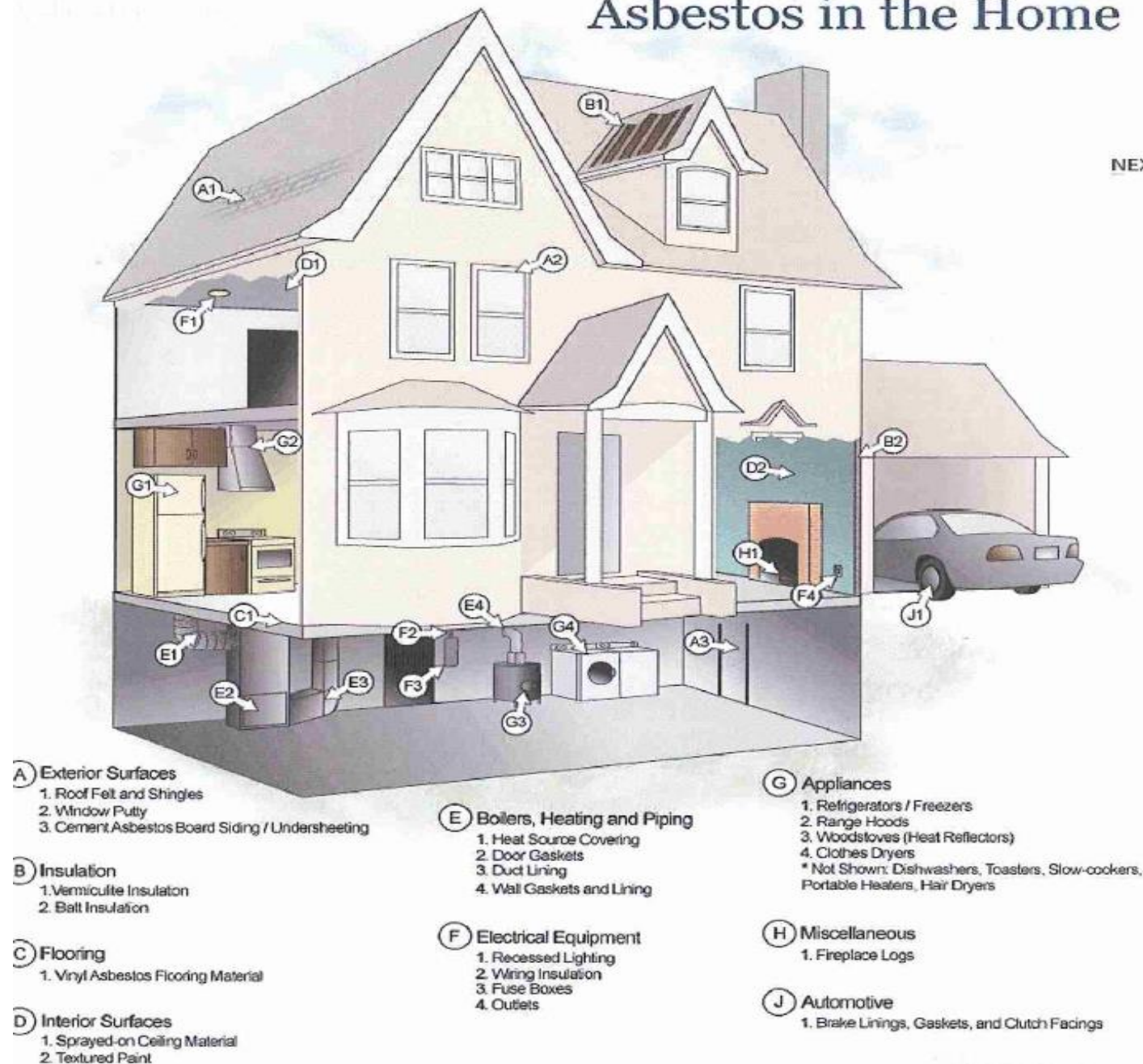
USES FOR ASBESTOS?

- Used in more than 3000 products.
- Is resistant to fire and chemical breakdown.
- Has a fibrous structure which was used as a filler, binder and reinforcement of other materials.
- Classed generally as either a “Bonded” or “Friable” form
- Used as lagging for heat retention & fire insulation



Asbestos in the Home

NEXT



Friable vs Bonded (non Friable)

Friable: is easily crumbled, pulverised or reduced to powder by hand pressure

Bonded: fibre that is contained within a hard cement, vinyl or resin matrix which (if damaged) will release some fibres initially but usually will not continue to do so unless further damage occurs.



Asbestos product groups

- Thermal insulation (pipe and boiler insulation usually very high %).
- Fire proofing materials (sprayed insulation, fire door cores. Both very high %).
- Asbestos cement formed products (roof and wall cladding, flashings and vents generally ranged from 4-12% but found as high as 80% in older products).
- Decorative acoustic finishes (trowel/spray on finishes popular over old plaster ceilings in the 1970s).
- Electrical switchboards, insulators and fittings.

Asbestos product groups

- Vinyl floor coverings (tile and sheet generally between 2-6%).
- Friction materials (vehicle/machinery brake and clutch linings: prohibited from further use in the 2003 ban).
- Asbestos felts.
- Paints, coatings, sealants and adhesives.
- Packing and gaskets.
- Textiles (woven cloth, blankets).

Asbestos Management

- Persons with management of buildings (which are workplaces) have a duty to identify, record and manage asbestos containing materials (ACM's)
- Engage a competent person to identify asbestos so far as reasonably practicable (licensed asbestos assessor - Reg 489)
- Identify through scientific analysis where possible
- Presence and location to be labelled where reasonably practicable

Asbestos Registers

WHS Regulation (2012) 425

All workplaces must have an up-to-date register that:

- records ACM including date identified and location, type and condition; or
- states that no ACM identified or likely to be present from time to time.
- Applies to all buildings constructed before 31 December 2003

Asbestos Related Work

Work Health and Safety Duties

The model WHS Regulations set out a framework for managing asbestos materials in workplaces and cover:

- training all workers who might come into contact with asbestos
- naturally occurring asbestos
- removing asbestos (under 10 m²)
- licensing and competency requirements for asbestos removalists and assessors.

Asbestos Related Work

- Area must be separated from other areas in workplace
- Barricades and signs erected
- Air monitoring carried out if uncertain if exposure standard will be exceeded
- Must have decontamination facilities
- Must dispose of waste and contaminated PPE in line with relevant Codes and regulations

Asbestos Related Work

- Uncertain if work is asbestos related, PCBU must ensure samples analysed at:
 - NATA accredited lab
 - Lab approved by regulator
 - Lab operated by regulator
- PCBU must give person engaged to carry out this work information about risks and details of health monitoring

Asbestos Management Plan

WHS Regulation 429

- There must be a written asbestos management plan for the workplace
- Plan must be maintained and information must be up-to-date

Avoid Asbestos Exposure

WHS Regulation (2012) 419

- (1) A person conducting a business or undertaking must not carry out, or direct or allow a worker to carry out, work involving asbestos.
- Exemption – above does not apply if the work involving asbestos is any of the following:
- (c) maintenance of, or service work on, non-friable asbestos or ACM, fixed or installed before 31 December 2003

Choosing the best control measure

When choosing the most appropriate control measure, you should consider:

- Eliminating the risk, for example removing the asbestos. Substituting or isolating the risk or applying engineering controls, for example enclosing, encapsulating, sealing or using certain tools, using administrative controls, for example safe work practices.
- Using the correct/appropriate PPE.

How to Avoid Asbestos Exposure

If you do not know that a building material is asbestos free....DO NOT DISTURB IT

NEVER

Drill	Break
Hammer	Damage
Cut	Move
Saw	Disturb

How to Avoid Asbestos Exposure

If you do not know that a building material is asbestos free....DO NOT DISTURB IT

NEVER

Use a high pressure water spray

Use compressed air

Health Monitoring

WHS Regulation 435

- The PCBU has a duty to provide health monitoring
- National Asbestos Exposure Register
- enquiries@asbestossafety.gov.au

Personal Protective Equipment

- Disposable Tyvec suits, gloves
- Respiratory protection
- Positive powered air – if not clean shaven
- Boots and tools need to be wet wiped thoroughly
- Dispose of as contaminated waste – double bagged
- Personal decontamination

Health Risks of asbestos

- Asbestos is a danger because fibres are small enough to become airborne and be inhaled, causing injury to the lungs
- There are low levels of asbestos in the ambient air. 10-200 fibres in every cubic metre (1000L) = 0.01-0.2 f/L
- A cubic metre is the amount of air typically breathed by a person every hour

Asbestos Related Diseases

- Whether a person goes on to develop an asbestos-related disease depends on a range of circumstances or exposure factors; for example, the level and duration of exposure, length of time since first exposure, the fibre type, and concurrent exposure to tobacco smoke and other carcinogens.
- Pleural plaque
- Asbestosis
- Lung Cancer
- Mesothelioma

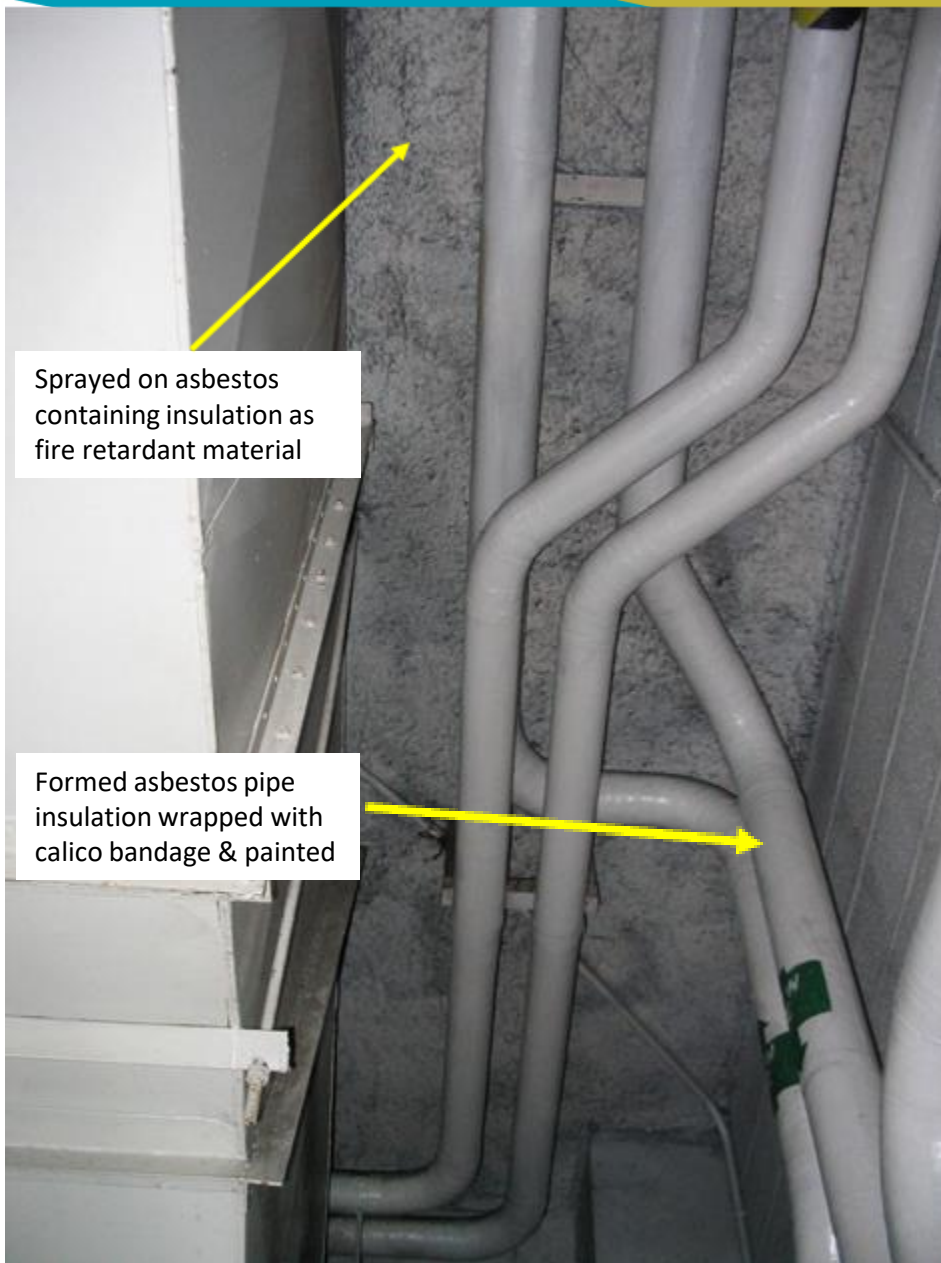
Asbestos Related Diseases

- Asbestos related disease costs Australia over \$500 million a year
- \$192 million hospital & primary care costs & \$321 million indirect costs arising from time out of the workforce
- Asbestos related diseases take the lives of approximately 4000 people per year including 700 deaths each year from Mesothelioma.

The Three Waves

- First Wave – asbestos mines, mill and transport workers who handled the raw asbestos fibre, ACM manufacturers.
- Second Wave – workers using AC products – home renovators
- Third Wave – affects all society as people are environmentally exposed in their workplaces, homes & the built landscape.
- Not peaking until 2025. (ASEA)





Sprayed on asbestos
containing insulation as
fire retardant material

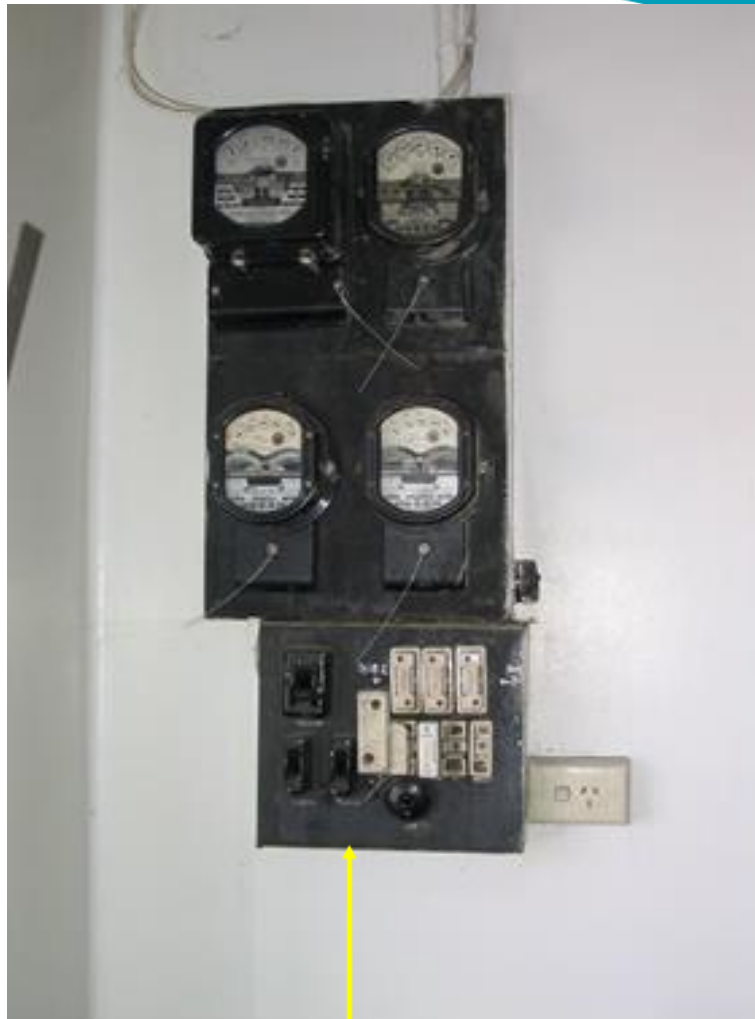
Formed asbestos pipe
insulation wrapped with
calico bandage & painted



Asbestos containing formed flue pipes insitu inside a wall cavity.



A close up of the James Hardie flue pipe label



Backing panel for mounting fuses and meters.
Manufactured from coal tar pitch and asbestos.
Brand names include Zelemite & Miscalite.

Backing panel for mounting fuses.
Manufactured from coal tar pitch and asbestos.
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HARDIE'S ASBESTOS MILLBOARD




Hardie's Asbestos Millboard is a strong, light and flexible Asbestos sheet. It withstands temperatures up to 800° F. and is used for numerous purposes where a relatively thin sheet or board is required for insulation or protection against heat and fire.

Asbestos Millboard provides an efficient fire-retardant lining for ceilings, floors, walls and partitions; for cinema operators' or projection boxes, elevator shafts, gas ovens, oil burners and other purposes where an insulating medium is required in sheet form.



Section of Bailey Furnace Wall in the Bunnorong Power Plant of the Sydney County Council Electricity Undertaking. The entire furnace area is panelled with Hardie's Asbestos Millboard Sheets, which provide a durable, fire-retardant finish. Approximately 1,000 square feet of Millboard Sheets were used to enclose the furnace. The Millboard, incidentally, is applied over an inner insulation of Hardie's 85% Magnesia Blocks.





Plumbing work at a later date saw the sealed lagging removed to allow new pipe work. The lagging was poorly refitted after pipe work completed.

Original friable lagging wrapped, taped and Sealed in plastic when first installed

Burnie Court House ceiling cavity.



Same site as previous photograph.



Super 6 profile asbestos containing
Cement sheets being removed from
saw tooth industrial roof (Tas Paper Burnie)



Asbestos identification labels fitted to wall and ceiling sheets in a Wynyard school.



DUROBOND Vermiculite ReCoat

Unattractive dreary ceilings sparkle better than new when treated with this unique system

NO OTHER PRODUCT WORKS LIKE DUROBOND VERMICULITE RE-COAT

Old, unattractive and dreary

**SIMPLE TO USE
FULL INSTRUCTIONS SUPPLIED,
GREAT FOR DIY &
TRADES PEOPLE**

Sparkling better than new



ALL OVER AMERICA...
MORE SCIENTISTS AND EDUCATORS
SMOKE KENT with the **MICRONITE FILTER**
 than any other cigarette!

**REPORT COMPARISON OF
 TARTARIC ACID CONTENT, 1964-1965**

Brand	1964-1965
KENT	0.12%
Winston	0.15%
Camel	0.18%
Marlboro	0.20%
Filter	0.22%

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For good smoking taste,
 it makes good sense to smoke **KENT**

REGULAR KENT, KING KENT
 OR TRUTH MIGHT BE

A PRODUCT OF A LORILLARD COMPANY, MADE WITH THE FINEST CIGARETTES THROUGH LORILLARD RESEARCH



Typical dimpled back on asbestos containing cement sheet



Insulation used in ceiling spaces similar to the Mr Fluffy product

Everything including the kitchen sink.



Sink Sound
Dampener



Protect Your Feet by wearing Patent Asbestos Socks.

No More Pains in the Feet. The Comfort Experienced in Wearing Asbestos Socks is Absolutely Marvellous. Hot, Perspiring, Inflamed and Tender Feet, Corns, Bunions and Bad Feet Prevented and Absolutely Cured by wearing Patent Asbestos Socks, (patent).

An Army Surgeon discovered that soldiers after marching suffered more from sores of the feet than from actual physical fatigue. After long study he found that this was due to the irritation set up by the smooth leather linings of their boots. The Asbestos Socks, made from impregnated asbestos with a slightly rough grained surface prevents the foot slipping inside, and walking is thus free tiring. Asbestos being a non-conductor the feet are kept from the variations caused by hot or cold weather, a genuine perk and blessing to the tired foot. In fact the comfort experienced in wearing these socks is absolutely marvellous. Try a pair at once. Satisfaction Guaranteed or money refunded. They will renew the feet of anyone who has to stand long or do much walking, such as shop assistants, policemen, nurses, sailors, soldiers, postmen, cyclists, athletes etc. Made in two qualities, 1/- and 2/- per pair, postage 2d per pair extra. Six pairs either quality sent for price of five pairs. Since war and more this cover five pairs.

Universal Supply Co. 460 George St. Sydney, N.S.W.

Before Wearing *After Using*

Capet Underlay & Adhesive





FURTHER INFORMATION

Model Code of Practice

The model Code of Practice: *How to Manage and Control Asbestos in the Workplace* has information on identifying asbestos, creating an asbestos register and managing the risks of asbestos in the workplace.



Any Questions?

