Communicating asbestos facts and figures



Introduction

Who this guide is for?

This guide is for anyone who needs to communicate about asbestos risk with the public. It should be read in conjunction with the Guidelines for communicating about asbestos risks.

What is this guide about?

This guide includes model language that can be used to communicate key asbestos facts and figures. Where options exist for what to say, you can choose your preferred statement(s), depending on the circumstances (e.g. raising general awareness or providing advice on what to do). These statements are based on established scientific facts; asbestos safety research; communications and message testing; and legally accepted authoritative information on the Australian history of asbestos mining, manufacture, and use.

Using this guide will help ensure that asbestos information communicated to the public is clear, consistent and evidence based. It has been developed to encourage the consistent use of evidence based and verified information about asbestos, to remove variations in public information on asbestos, which acts as a barrier to achieving good public health outcomes.

This guide is not intended to replace language used by regulators to communicate legal requirements.

Feedback

This is a living document and will be updated regularly, with evolving research, new information and knowledge.

This guide was developed in consultation with state and territory government agencies, and non-government organisations.

Feedback can be sent to engage@asbestossafety.gov.au with the Subject line ' Feedback - Communicating asbestos facts and figures'

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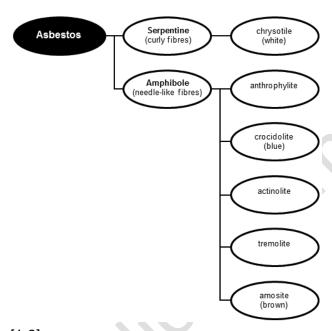
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Key terms and definitions

The information below will help you understand this guide and therefore terms/phrases are not presented in alphabetical order.

Asbestos

A group of six types of naturally occurring, rock forming silicate minerals made up of thin, microscopic fibres



[1-3]

Airborne asbestos fibres

Invisible asbestos fibres that are released into the air when asbestos or asbestos-containing material is disturbed [4]

Asbestos-containing material

Any material or thing that, as part of its design, contains asbestos; there are friable and non-friable (or bonded) asbestos-containing materials [1]

Note 1: 'materials' or 'things' that contain asbestos can also be referred to as asbestos 'products' or 'applications', and the terms can be used interchangeably.

Note 2: 'asbestos cement products' are one type of material or thing, and this phrase is not to be used to describe all generic asbestos-containing materials.

Friable asbestos

Material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry and contains asbestos [5]

Note 3: friable asbestos has a higher risk of airborne asbestos fibres being released when it is handled, compared with non-friable asbestos.

Non-friable (bonded) asbestos

Material containing asbestos that is not friable asbestos including material containing asbestos fibres reinforced with a bonding compound [5]

Note 4: non-friable asbestos may become friable asbestos through deterioration or damage.

Asbestos register

A document that lists the known locations, or likely presence, of asbestos in a workplace [5, 6]

Asbestos management

The process of preventing people being exposed to airborne asbestos fibres so far as is reasonably practicable; involves identifying asbestos, assessing the risk of asbestos exposure and then implementing measures that will eliminate or minimise the risk of asbestos fibres becoming airborne

Asbestos volumes: Stocks

An estimate (based on modelling) of the volume (tonnes) of asbestos-containing materials remaining in the built environment [7]

Asbestos volumes: Flows

An estimate (based on modelling) of the volume (tonnes) of asbestos-containing materials reaching end of product life, that will go to waste or disuse [7]

Asbestos hazard

Asbestos fibres—themselves, or from within an asbestos-containing material—that become airborne and inhaled; asbestos fibres are a hazard because they possess chemical and physical properties that are toxic to human health [8]

Asbestos risks

The likelihood of being exposed to asbestos fibres, and if you are exposed, the likelihood that an asbestos-related disease might develop [8]

Asbestos-related diseases

The diseases that can arise due to asbestos exposure; the widely accepted asbestos-related diseases are lung cancer, malignant pleural or peritoneal mesothelioma (cancer of the mesothelial cells which cover most internal organs), laryngeal cancer, ovarian cancer, and asbestosis (pneumoconiosis caused by asbestos) [9]

Note 5: we recommend not abbreviating the phrase asbestos-related diseases to ARDs, as this acronym is not well understood by the public.

First wave of asbestos-related diseases

Asbestos-related disease due to mining, milling ore and making asbestos products [10]

Second wave of asbestos-related diseases

Asbestos-related disease due to working with and using asbestos products [10]

Third wave of asbestos-related diseases

A *potential* third wave of asbestos-related disease that may occur due to repairing, renovating or demolishing asbestos-containing materials; can relate to both occupational and non-occupational exposure—is largely used to refer to exposure during home maintenance and renovation [10-12]

Note 6: data from the Australian Mesothelioma Registry suggests but does not yet establish that home improvement/renovation is resulting in a third wave of asbestos-related disease.

Eradication of asbestos-related diseases

Achieving the aim of the Asbestos National Strategic Plan, which is preventing exposure to asbestos fibres.

Eradication of asbestos-containing materials

Removing asbestos-containing materials entirely from the built environment

Note 7: given the large amounts of legacy asbestos present in the built environment, the goal of eradicating asbestos-containing materials is aspirational.

Asbestos safety

Safe handling and management of asbestos, implementation of controls that eliminate or reduce the risk of exposure to asbestos fibres.

Note 8: asbestos itself can never be safe; asbestos products can be removed safely/handled safely/ disposed safely if correct procedures are followed.

Asbestos awareness

Changing attitudes and behaviours by providing people with information on the potential health risks of asbestos to help them understand how to prevent exposure to asbestos fibres [13]

Note 9: this phrase cannot be used interchangeably with 'asbestos safety'.

How to communicate asbestos facts and figures

Asbestos – general information

Asbestos identification

What to say

- You cannot see asbestos fibres.
- Asbestos fibres are invisible to the naked eye.
- You cannot tell if a material contains asbestos just by looking it.
- Only scientific testing of a sample can confirm the presence of asbestos.
- Professionals who can assist with identifying asbestos include:
 - o occupational hygienists who have experience with asbestos
 - o licensed asbestos assessors and removalists
 - individuals who have undertaken a recognised training course in asbestos identification



Contextual notes

Asbestos fibres are in the low micron (one-millionth of a metre) size range and are only visible to humans with optical aids like microscopes—they are similar in size to dust particles or approximately 1/9th of a human hair.

The Australian Standard AS4964-2004 (Method for the qualitative identification of asbestos in bulk samples) requires at least polarised light microscopy for asbestos detection (with optional quantitative confirmation by higher resolution techniques such as infrared spectroscopy, X-ray diffraction, scanning electron microscopy or transmission electron microscopy).

WHS laws provide that only an asbestos test performed in an accredited laboratory can be used to identify asbestos in a material.

	In Australia, the National Association of Testing Authorities (NATA) accredits laboratories for asbestos testing.
Source	[14, 15]

Asbestos bans

What to say	Asbestos was completely banned in Australia from 31 December
	 From 31 December 2003, the total ban on manufacture, use, reuse, import, transport, storage or sale of all forms of asbestos came into force. During the 1980s, asbestos materials were phased out in favour of materials made with no asbestos. All asbestos mining in Australia was stopped by 1983.
Contextual notes	The May 2001 meeting of the former Workplace Relations Ministers' Council (WRMC) agreed to the imposition of a ban on the import and use of chrysotile asbestos no later than 31 December 2003.
	All states and territories implemented the prohibition from 31 December 2003 – check your jurisdiction for details on commencement of relevant laws on 31/12/2003 vs 1/1/2004.
	Chrysotile asbestos was banned from that date and for other forms of asbestos the bans were clarified. Therefore the word "completely" or "fully" needs to be used.
	Bans on the use of crocidolite and amosite were progressively put in place across Australia from the late 1970s onwards.
Source	[16, 17]

Asbestos laws

What to say	•	Work health and safety laws have specific requirements to prevent
		asbestos exposure in all workplaces.
	•	Under environment protection laws everyone has a duty not to pollute
		the environment or to unlawfully dispose of asbestos waste.

	 Everyone also has a duty under common law and public health laws to take reasonable care not to cause harm to another person. This includes preventing the release of airborne asbestos fibers. People selling homes that contains asbestos may be legally obliged to tell potential buyers. Requirements differ in each state, so they should seek advice from their real estate agent or property conveyancer.
Contextual notes	The main laws to protect people from asbestos exposure are:
	Work health and safety laws ensure the safe management and removal of asbestos in 'workplaces' – a place where work is carried out for a business or undertaking and includes residential premises that become a 'workplace' when a contractor is working there.
	Public health laws apply to anything that puts at risk or damages public health. By definition this includes asbestos, although only Queensland and Western Australian public health laws contain specific provisions relating to asbestos.
	Environment protection laws have requirements relating to the safe transport, storage and disposal of asbestos.
	Real estate and consumer protection laws have requirements relating to the disclosure of asbestos in a property to prospective buyers.
Source	[18]

Legacy use of asbestos in Australia

When were friable asbestos products first used?

What to say	Friable asbestos products were used in residential, commercial and industrial settings beginning in the late 1800s.
Contextual notes	Some early friable asbestos applications were in heavy industry particularly for steam-driven machinery. Some friable asbestos products can also be found in homes.
Source	[19, 20] (ASEA report available on request)

When were asbestos cement materials first used?

What to say	 Asbestos cement materials were first imported to Australia around 1903. Asbestos cement materials were first manufactured in Australia from around 1917 onwards.
Contextual notes	The vast majority of asbestos-containing products used in buildings were non-friable (or bonded) asbestos cement materials.
Source	[21, 22]

Asbestos used in homes

What to say	Homes built before 1990 can contain asbestos.
10,	Asbestos can be anywhere inside or outside the home.
Contextual notes	The peak period of use in residential building materials was from the mid-
	1940s until the late 1980s.
· ·	Research has shown that 1990 is a simple heuristic for the public to
	remember.
Source	[19, 23] (ASEA report available on request)
	Market testing of communication assets for NAAW 2021

Density in the residential environment

What to say	Across Australia, asbestos is in 1 in 3 homes.
Contextual notes	This statistic reflects average density levels across Australia. This means in some areas the density will be higher (e.g. old industrial areas), while in other areas it will be lower (e.g. newer developments).
Source	Source of the statistic is unknown but ongoing research by the Latrobe Valley Asbestos Taskforce and ASEA support this

Asbestos in workplaces

What to say	Under Work Health and Safety laws, an up-to-date asbestos register must be kept for all workplaces where asbestos is present or assumed to be present.
Contextual notes	Under WHS Regulations in Queensland, New South Wales, the Australian Capital Territory, Tasmania, South Australia and Northern Territory an asbestos register must also be prepared and kept for a workplace constructed before 1 January 2004 when no asbestos or ACM is identified at the workplace or is not likely to be present from time to time. The register must state that no asbestos is present.
Source	[5]

Asbestos products

Number of products

What to say	Asbestos was used in over 3,000 products
Contextual notes	Note – this statement should not be changed to "building products" or "industrial products" – it should stand alone as "products" to be accurate.
Source	[24]

Age of products

What to say	•	Asbestos products in Australian buildings are anywhere between 30-
		100 years old.

	This age means that asbestos products are starting to degrade, increasing the risk of becoming friable and releasing fibres.
Contextual notes	In the 2021 Stocks and Flows report, product lifespan (the mean lifetime or Lav) is an estimate of how long products typically remain in the built
	environment and is not a direct indicator of product age or life.
Source	[7, 23] (ASEA report available on request)

National asbestos stocks (amount remaining in the built environment)

What to say	 It is estimated that 13 million tonnes of asbestos-containing materials were consumed in the Australian built environment. It is estimated 6.4 million tonnes of Australia's asbestos legacy remains in the built environment. Asbestos cement products make up around 95 % of the remaining legacy asbestos in the built environment.
Contextual notes	1980: stocks peaked at approximately 11 million tonnes 2021: estimated stock remaining in the built environment is between 6.1 and 7.5 million tonnes. 2060: without significant intervention, stocks will passively decline to approx. 1 million tonnes.
Source	More than 50 % (3.4 million tonnes) of asbestos cement products remaining are asbestos cement water and sewerage pipes. [7]

Removal and waste

Emergency removal vs planned removal

What to say	Emergency or unplanned removal of asbestos-containing materials is more expensive than planned removal.
Contextual notes	Asbestos removal companies highlighted a median 20% cost difference
	between planned asbestos removal and urgent removal of asbestos.
Source	[25]

Asbestos waste

What to say	 Asbestos waste is increasing annually. This includes asbestos-contaminated soils and rubble. Asbestos waste in Australia has increased nationally from approximately 315,000 tonnes (in 2006-07), to 1.42 million tonnes (in 2020-21). 21% of Australia's hazardous waste is asbestos.
Contextual notes	Asbestos waste data represents an estimate derived from state and territory government hazardous waste tracking systems. It is recorded and reported differently in different jurisdictions. Most asbestos waste comes from renovation and urban development and goes to landfill. Building and demolition waste can also be contaminated with asbestos.
Source	[26]

Illegal dumping

What to say	It is estimated that over 6,000 tonnes of asbestos-containing materials are illegally dumped in Australia per annum.
Contextual notes	The estimate in 2016 was that around 6,300 tonnes of ACMs were illegally dumped, at a cost of around \$11.2 million per annum.
	These figures involve several significant assumptions based on limited data.

Source	[27]

Asbestos awareness levels

In homeowners

What to say	Homeowners mostly know that asbestos is dangerous, but do not have a good understanding of where asbestos can be found in the home and how they can protect themselves.
Contextual notes	Only 6% of home improvers spontaneously mentioned asbestos as a potential risk when planning a home improvement project. Only 2 in 3 participants at most could correctly identify each potential source of asbestos when prompted with a list – while 2 in 5 picked at least one incorrect source.
	28% of home improvers who have encountered asbestos admit to inappropriate disposal methods – most commonly placing it in their household (red) bin.
Source	[28]

In property managers and real estate agents

What to say	 Both real estate agents and property managers are aware of asbestos exposure dangers and are managing asbestos presence in a mostly open and transparent manner. Most property managers and real estate agents mistakenly believed that pre-sale property inspections cover the presence of asbestos, potentially relying on them for disclosure purposes.
Contextual notes	Real estate agents and property managers may have obligations to disclose the presence, or potential presence, of asbestos when selling or renting properties.
	69% real estate agents and 83% property managers believe that a presale building inspection report will tell you if asbestos is present, when usually it will not.

	Most real estate agents and property managers are aware that asbestos may be present in older buildings.
	50% of property managers and agents reported that they always inform prospective buyers or tenants that a property they are interested in contains asbestos, only 21% reported never or rarely doing so.
Source	[29] (ASEA report available on request)

In workers in workplaces with asbestos containing materials

What to say	TBC
Contextual notes	
Source	Awaiting outcomes of 2022 ASEA awareness surveys

In tradespersons

What to say	TBC
Contextual notes	
Source	Awaiting outcomes of 2022 ASEA awareness surveys

Asbestos and health

Risk of disease - Cancer risk

What to say	Asbestos causes cancer.
Contextual notes	This clear unqualified statement has been tested as being highly effective
	at prompting safe behaviours in the general public.
	It has been proven that all forms of asbestos, including chrysotile, cause
	mesothelioma and cancers of the lung, larynx and ovary.
	Associations have also been observed between asbestos exposure and
	cancer of the pharynx, stomach and colorectum, although the evidence is
	not sufficient to identify asbestos as a cause of those cancers.
Source	[2]
	Market testing of communication assets for NAAW 2021

Risk of disease – exposure level

What to say	 The World Health Organisation says there is no safe level of exposure to asbestos. No threshold has been identified below which no carcinogenic effect will occur. The workplace exposure standard for asbestos is 0.1 fibre per millilitre of air over an 8-hour period.
Contextual notes	In the workplace context exposure standards should be referenced. The Victorian Compliance Code: Managing asbestos in the workplace explains the workplace exposure standard as 'not representing a "risk free" level at which every employee can be guaranteed absolute protection from any asbestos related illness. Nor does the asbestos exposure standard constitute a "fine line" between satisfactory and unsatisfactory working conditions'.
Source	[5, 30, 31]

Risk of disease – Dose-response

What to say	The greater the exposure, the greater the risk of developing an asbestos-related disease.
Contextual notes	
Source	[32]

Risk of exposure

What to say	All asbestos-containing materials are dangerous if damaged, disturbed or deteriorating.
Contextual notes	This refers to both friable and non-friable asbestos.
Source	[32]

Asbestos in drinking water

What to say	 The weight of evidence of current toxicological data does not support the hypothesis that ingesting asbestos from drinking water is associated with increased cancer risk. The concentrations of asbestos fibres in drinking water should be minimised as far as practical—the measures taken to control the risks of airborne asbestos exposure from asbestos cement pipes are also effective in eliminating or minimising ingestion of asbestos fibres in drinking water. The WHO suggests that investigative monitoring to obtain information on the contribution of older asbestos cement pipes to fibre numbers, types, size and shape in drinking water would be useful.
Contextual notes	There is no health-based guideline value for asbestos in drinking water in Australia or internationally because the WHO concluded that there is no consistent evidence for adverse health effects from ingested asbestos.
Source	[33-35]

Asbestos-related disease

Types of asbestos-related diseases

What to say	 Asbestos causes several life-threatening diseases. Exposure to asbestos fibres can cause asbestosis, mesothelioma, and cancer of the lung, ovary, and larynx
Contextual notes	Asbestos is the only known cause of asbestosis and is the predominant cause of mesothelioma.

Cancer of the lung, larynx and ovary, are known to be caused by a	
	number of other carcinogenic agents in addition to asbestos.
Source	[2]

Annual deaths from asbestos-related diseases in Australia

What to say	 An estimated 4,000 Australians die annually from asbestos-related diseases. This is four times the annual road toll. It is estimated that around 30% of all lung cancer deaths in Australia are attributable to past asbestos exposure.
Contextual notes	The ARD figure represents estimated deaths. The estimate for 2019 was 4449.
	Of the estimated deaths in 2019, 3307 were due to lung cancer, 802 due to mesothelioma, 148 due to asbestosis, 144 due to ovarian cancer and 48 due to cancer of the larynx.
	Estimates of the number of deaths from ARDs in Australia are reported form data produced by the Global Burden of Disease (GBD) study,
	Deaths from ARDs are those deaths that the GBD study has attributed to the risk factor of past occupational asbestos exposure only.
	The road toll figure represents actual deaths. The exact figure for 2019 was 1175.
.01	The number of deaths due to ARDs in Australia has continued to increase steadily for both men and women between 1990 and 2019 (the period covered by the GBD study).
00,	In Australia in 2019, past asbestos exposure was estimated to be the cause of:
	- 33% of all deaths from lung cancer*
	- 99% of all deaths from mesothelioma**
	- 100% of all deaths from of asbestosis***
	- 13% of all deaths from ovarian cancer, and
	- 19% of all deaths from cancer of the larynx
	*Includes tracheal, bronchus, and lung cancer

	**Asbestos exposure is known to be the predominant cause of
	mesothelioma, but other factors can be the cause in rare circumstances.
	*** Asbestos exposure is the only known cause of asbestosis.
Source	[36]

Mesothelioma – Annual deaths

What to say	 Approximately 700 people die annually from the aggressive cancer mesothelioma which is caused mainly by exposure to asbestos. There is no cure for mesothelioma.
Contextual notes	642 mesothelioma cases were diagnosed in 2020 were reported to the Australian Mesothelioma Registry (AMR), with a median age at diagnosis of 75.
	696 deaths of people with mesothelioma were recorded on the AMR in 2020 —a rate of 2.1 deaths per 100,000 population.
	Mesothelioma can be associated with occupational and non-occupational exposure to asbestos. Because mesothelioma typically develops a long time after exposure, the majority of deaths relate to occupational exposure in workplaces that occurred before current work health and safety laws were in place.
	The Australian Mesothelioma Registry (AMR) produces the most up to date and accurate data on mesothelioma incidence and mortality in Australia. The AMR collects information on new cases of mesothelioma diagnosed in Australia since 1 July 2010.
6/1/0//	Whilst the AMR reports actual recorded incidence and mortality for mesothelioma in Australia, the GBD Study reports estimates of disease based on known risk factors and other available data. For this reason, estimates reported through the GDB Study may differ from year to year to those captured by the AMR. Both data sources are valuable for studying mesothelioma prevalence.
Source	[12, 37]

Mesothelioma – Latency period

What to say	 Mesothelioma has a long latency period with symptoms typically appearing decades after a person has been exposed to asbestos. The latency period can range from 20–60 years.
Contextual notes	One study quoted in the latest AMR report found the median latency to be 38 years. Another reported a latency period of between 33 and 44 years.
Source	[12, 38]

Mesothelioma – Non-occupational exposure risk

What to say	 The highest risk of exposure today is in the home / residential environment. In 2020, it was estimated that 1 in every 3 new mesothelioma cases was non-occupational exposure. In Australia there is an increasing number of cases of mesothelioma diagnosed that have an associated non-occupational exposure.
Contextual notes	There are several factors that contribute to the risk during or from home renovation, e.g. lack of awareness and appreciation of the risk, lack of knowledge of detailed controls in the laws, enforceability of the applicable laws.
	Asbestos exposure information related to mesothelioma disease is gathered from a small subset of consenting individuals with mesothelioma via a questionnaire run by the AMR.
101	Most of the information available about asbestos exposure currently, relates to past occupational exposures, and there is a lack of information about non-occupational exposures.
600	This is why data collected from the Australian Mesothelioma Registry suggests, but does not establish, that home renovation is now contributing to mesothelioma.
	Of the 1,028 asbestos exposures detected and analysed through the AMR to date, most involved non-occupational exposure, either solely non-occupational exposure (35.8 %) or a combination of non-occupational and occupational exposure (52%). Only 12.2% of exposures were for occupational exposure only.

Source [10, 12]	
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Deaths from asbestos-related diseases worldwide

What to say	In 2016 an estimated 219,000 deaths globally were attributable to occupational exposure to asbestos.
Contextual notes	Systematic analyses of the 2016 GBD study published February 2020.
Source	[37]

Asbestos and all occupation-related cancer deaths

What to say	In 2016 asbestos was responsible for 80% of all occupation-related cancer deaths in high-income regions (Australasian, Western European, high income North America and Asia Pacifica regions) and 63% of occupation related cancer deaths globally.
Contextual notes	Systematic analyses of the 2016 GBD study published February 2020.
Source	[37]

Rising asbestos-related deaths

What to say	Even if asbestos exposures were to cease completely, deaths from asbestos-related cancers would be expected to continue for the next four to five decades.
Contextual notes	Systematic analyses of the 2016 GBD study published February 2020.
Source	[37]

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