



ASBESTOS TRANSPORT AND DISPOSAL

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INTRODUCTION

Asbestos, in particular friable asbestos products, poses health risks during removal, transport and disposal. It is important, therefore, that asbestos be handled appropriately during these operations.

Under the *Environment Protection (Industrial Waste Resource) Regulations 2009* the disposal of waste asbestos, whether of industrial or domestic origin, is controlled by EPA. In addition, EPA controls the transportation of asbestos of industrial (including commercial or trade) origin.

Under the Regulations, asbestos from industrial origins (including commercial or trade activities) is a prescribed industrial waste (PIW) and when packaged in accordance with this guideline is a Category C waste.

Processing and handling asbestos in the workplace is covered by the *Occupational Health and Safety Regulations 2007*. Any concerns about asbestos in the workplace should be discussed with the Victorian WorkCover Authority. The Department of Human Services should be contacted regarding any concerns about asbestos in domestic situations.

TYPES AND USES OF ASBESTOS

The three main types are white, blue and brown. Before 1980, they were mainly used in the production of asbestos cement sheeting and piping.

Asbestos was also used in the manufacture of insulation material and white asbestos was used in the

automotive industry to make brake linings and disc pads.

CERAMIC-BASED FIBRES

These guidelines can also be applied to the disposal of synthetic mineral fibres, including ceramic-based fibres with physico-chemical characteristics similar to those of asbestos.

WASTE MINIMISATION

Asbestos wastes occur in a variety of forms, ranging from fine fibres to large asbestos-cement sheets. Industry must ensure that asbestos, whether in the form of raw material or contained within products, is handled and disposed of without releasing asbestos fibres into the air. If the use of alternative materials is not possible, effective waste minimisation techniques should be implemented to reduce the overall consumption of asbestos.

TRANSPORT

EPA controls the transportation of asbestos from industrial activities. The transportation of domestic-sourced asbestos, unless it is removed by a licensed asbestos removalist, does not fall within EPA's statutory responsibilities. A householder may transport their own asbestos to a licensed landfill for disposal without transport certificates or a permitted vehicle. It is recommended, however, that the practice for handling and packaging asbestos, as detailed in this document, is applied to domestic activities.

When a commercial contractor (i.e., a licensed asbestos removalist) undertakes the removal of the asbestos from a domestic source, transport certificates and a permitted vehicle are required.

Owners of vehicles that transport industrial or commercially sourced waste asbestos must hold an EPA waste transport permit. The permit stipulates the necessary controls for the safe handling, transport and disposal of waste asbestos.

Packaging material must be protected and remain intact during transport and unloading. Any packaging that is damaged must be replaced or repaired prior to disposal. Vehicles should be carefully cleaned after transporting waste asbestos.

This guidance forms part of the Industrial Waste Resource Guidelines, which offer guidance for wastes and resources regulated under the *Environment Protection (Industrial Waste Resource) Regulations 2009*. Publication IWRG611.1 – July 2009. This replaces publication IWRG611, published June 2009.

The waste producer must provide a waste transport certificate. The waste transporter and the waste receiver must complete the appropriate sections of the certificate in accordance with the Regulations. Refer to the *IWRG Waste Transport Certificate* for detailed instructions on how to complete and distribute these certificates.

DISPOSAL

Disposal must only be at a site licensed by EPA to accept waste asbestos.

Persons intending to dispose of waste asbestos (both industrial and domestically sourced) should contact the disposal site operator to check whether the site is appropriately licensed to accept the waste.

Licence conditions require waste asbestos to be handled and covered in such a manner that no dust is generated. To achieve this and the long-term security of the disposal operation the following measures or equivalent practices should be adopted:

- Before compacting, cover with a layer of soil at least 300 mm thick or with a layer of waste at least 1 m thick.
- Asbestos must not be deposited within 2 m of the final tipping surface of the landfill.
- When not receiving waste, any containers used for temporary storage at a site must be covered.

It is preferable that a dedicated area of a landfill be used for asbestos disposal and that this area be clearly designated on site maps.

While landfilling of waste asbestos is generally appropriate, situations may arise where pre-treatment before landfilling should be considered. Acid treatment of white asbestos changes the nature of the asbestos fibres and appears to be the cheapest form of treatment available. Other treatment methods include thermal processes, chemical coagulation and immobilisation.

PACKAGING

In relation to workplaces, packaging of waste asbestos must comply with the *Occupational Health and Safety Regulations 2007* and should follow the guidelines set out in the *Worksafe Australia Asbestos Code of Practice*. For non-workplaces, where such instructions are not available, the following guidelines, based on the Code of Practice, should be observed:

Asbestos cement sheetings (AC sheetings) and asbestos cement pipes

- Thoroughly wet the articles and maintain in a wet condition until packaged for transport.
- Minimise cutting or breaking of articles to be packed.

- For packaging, place two layers of polythene sheeting, approximately 200 µm (0.2 mm) thick, in the cargo-carrying compartment of the vehicle.
- Place articles carefully on polythene sheeting to a height of less than 1 m and completely wrap the articles. Seal with adhesive tape. Packages should be small enough to be handled easily.
- Label the package with the asbestos warning mark (see Appendix A (b)).

Insulated lagged pipes, boilers, heaters and equipment

- Double-wrap the entire article with polythene sheets, approximately 200 µm (0.2 mm) thick, and seal with adhesive tape.
- Label the package with the asbestos warning mark (see Appendix A (b)).

Asbestos dust and friable asbestos

- Discharge dust into drums. (This should be carried out in wet condition, except where wetting down is not practicable.)
- Fix the drum lid securely using a suitable device (eg, toggle clips, screws, or bolt).
- Label each drum with a dangerous goods label (see Appendix A (a)).
- Label each drum with the asbestos warning mark at least three times on one side of each bag (see Appendix A (b)).

OR

- Discharge dust directly into double polythene bags approximately 200 µm (0.2 mm) thick. A maximum bag size of 1200 mm (length) x 900 mm (width) should be used. The bagged dust should be wetted before the bags are tied and the loaded weight should not exceed 30 kg. Bags should be filled to not more than 50 per cent capacity.
- Tie each bag.
- Label each bag with a dangerous goods label (see Appendix A (a)).
- Label each bag with asbestos warning mark at least three times on one side of each bag (see Appendix A (b)).

Slurry containing asbestos fibre and dust

- Remove fibres through chemical coagulation followed by filtration.
- Place residue into drums, as above.
- Label the container with a dangerous goods label (see Appendix A (a)).
- Label each container with asbestos warning mark at least three times on one side of each drum (see Appendix A (b)).
- Or other methods of packaging, transport and disposal as approved in writing by EPA.



Asbestos tiles, gaskets, brake Linings, clutch plates, acoustic insulation, non-bonded textiles, gloves, protective clothing and respirators

- Place material in double polythene bags, approximately 200 µm (0.2 mm) thick.
- A maximum bag size of 1200 mm (length) x 900 mm (width) should be observed.
- Tie each bag.
- Label the package with the asbestos warning mark (see Appendix A (b)).
- Place the packages in an enclosed skip for transportation.

Contaminated soil

If asbestos is identified in the soil, and disposal is the best option, under the Regulations, soils contaminated with asbestos are considered to be a Category C waste.

Soil with contaminants other than asbestos must be categorised using IWRG *Soil hazard categorisation and management* into either category A, B, or C. Soil must then be packaged for disposal as per this guideline. Treatment or disposal must be at a facility licensed to accept that category of waste.

Generally:

- Contaminated soil must be wet before any packaging is done.
- Soil should be carefully transferred to a suitable container, which should then be sealed.
- Label the container with the asbestos warning mark (see Appendix A (b)).

Soil that contains asbestos and no other contaminants must be disposed of as an asbestos-containing material (waste code N220) and the \$30/t levy applies.

If a landfill is licensed to receive asbestos, it can also receive soil containing only asbestos.

FURTHER INFORMATION

Environment Protection (Industrial Waste Resource) Regulations 2009.

IWRG Soil hazard categorisation and management.

The Australian Dangerous Goods Code (Volume 1 & 2): download a copy from the National Transport Commission website – www.ntc.gov.au (follow Safety and Compliance link).

Occupational Health and Safety Regulations 2007.

For workplace requirements and codes of practice

Victorian WorkCover Authority
Ground Floor, 222 Exhibition Street
Melbourne 3000

www.workcover.vic.gov.au/wps/wcm/connect/WorkSafe/Home/

Tel: 03 9641 1444

For information on domestic issues

Department of Human Services
(Environmental Health Unit)

www.health.vic.gov.au/environment/home

Telephone 1300 761 874

EPA Contact

Please see the 'Contact Details' page of EPA's website - www.epa.vic.gov.au.



APPENDIX A – LABELLING AND MARKING

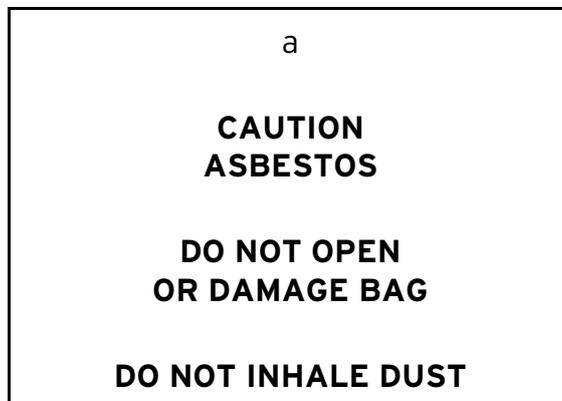
Every package containing friable asbestos in excess of 2 kg or 2 L must be clearly marked on the outside.

(a) Proper shipping name as shown below

Proper Shipping Name	White Asbestos	Brown Asbestos	Blue Asbestos
UN Number	2590	2212	2212
Packing Group Number	III	II	II
Hazchem Code	2X	2X	2X
Class Label	9	9	9

Note: Packaged dangerous goods only need to be marked with UN number, proper shipping name and Dangerous Goods Class label.

(b) Asbestos warning marking as shown below



The height of this marking should be approximately 75 mm x 90 mm.

(c) Placarding of road vehicles

Every vehicle carrying asbestos wastes in a quantity of 500 kg or 500 litres is considered a placarded load and must display Dangerous Goods Class labels as shown below, at the front and the rear of the vehicle.



The Class label must not be less than 250 mm square and must be firmly affixed to the vehicle.