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## Copper chrome arsenic (CCA) treated timber

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### Summary

- Copper chrome arsenate (CCA) treated timber is wood that has been treated with a preservative containing copper, chromium and arsenic.
  - CCA-treated timber should not be used to build children's play equipment, patios, domestic decking, handrails, new garden furniture, exterior seating or picnic tables.
  - As a precaution, you should limit possible exposure to CCA-treated timber chemicals – especially for young children.
  - Never burn CCA-treated timber in fireplaces, barbecues, wood stoves or any wood fire.
  - After a bushfire, keep children and pets away from the CCA-treated timber ash until it is removed, and follow safety precautions for clean up.
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Copper chrome arsenate (CCA) treated timber is wood that has been treated with a preservative containing copper, chromium and arsenic. CCA treatment prolongs the life of the wood. This is why, in the past, CCA treated timber was commonly used in decking, playground equipment, fences, retaining walls, jetties and vineyards.

Concerns have been raised regarding the potential health risks of CCA-treated timber.

### The preservation process of wood

The CCA process was pioneered in 1933 and is used worldwide. Copper and arsenic in the preservative protect the wood from insect and fungal attack. Chromium (chrome) 'locks' the copper and arsenic into the timber and reduces the risk of the chemicals leaching out. The CCA process gives the treated wood a green tint.

### Arsenic

The main concern with CCA-treated timber is that it contains arsenic, which can be ingested (swallowed) or inhaled (when CCA-treated timber is burnt). Over time, small amounts of chemicals may leach from CCA-treated timber, but research has found that the amount of leached arsenic is less than that found in common foods.

Since the general population is exposed to naturally occurring arsenic in soil, water and food, the human body can tolerate small amounts of arsenic.

### International concerns about CCA-treated timber

Although the chemicals are fixed within the dry wood in CCA-treated timber, concerns have been expressed internationally about the potential for harm as small amounts of arsenic can leach out of the surface of the timber.

The US and Canada jointly decided to restrict the use of CCA-treated timber in non-industrial settings after January 2004. In March 2005, the Australian Pesticides and Veterinary Medicines Authority (APVMA) reviewed the safety of CCA-treated timber use in Australia.

### Australian recommendations

- CCA-treated timber should not be used to build children's play equipment, patios, domestic decking, handrails, new garden furniture, exterior seating or picnic tables.
  - CCA-treated timber can be used for poles, fencing, landscaping timbers, piling and other structure foundations, residential construction, industrial and commercial construction, rural and farm use, fresh and salt water structures, signage and boat construction.
  - Existing structures made from CCA-treated timbers do not need to be removed and replaced until they reach the end of their functional life.
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These recommendations have been made as a precaution since there is no evidence to suggest that CCA-treated timber is harmful when handled or used properly.

### **How to reduce risk in your home workshop**

You should limit possible exposure to the chemicals in CCA-treated timber as a precaution.

When using CCA-treated timber at home, you should:

- Select the correct timber for the job. The timbers are treated to different levels according to their intended end use. Observe warning labels on CCA-treated timber.
- Cover any existing skin injuries such as cuts, wounds or abrasions before you work with CCA-treated timber.
- Wear a dust mask labelled either as P1 or P2 to avoid inhaling sawdust (P2 masks are sometimes referred to as N95 masks).
- Wear eye goggles, gloves and appropriate clothing to prevent splinters.
- Keep food and drinks away from sawdust or CCA-treated wood surfaces.
- Wash your hands and face after working with the wood, and before eating, drinking or any other activity that involves hand-to-mouth contact, such as smoking.
- Avoid sawing or sanding the wood in confined spaces. Work with CCA-treated wood outdoors whenever possible.
- Clean sawdust from personal protective equipment (PPE) before you use it again.
- Clean your workshop or garage thoroughly – don't leave sawdust lying about.
- Reseal cut surfaces with a timber preservative.
- Use stainless steel or 'hot-dip' galvanised plates, bolts and nails.

### **Playground equipment**

It has been proposed that children risk eating tiny amounts of arsenic from their hands after playing on CCA-treated timber play equipment or swallowing the soil surrounding the equipment. However, there is insufficient evidence to demonstrate that CCA-treated timber poses a health risk.

CCA treated timber has been in use for 30 years and no cases of adverse health effects have been reported in children playing on (or near) CCA-treated timber play equipment.

Precautions to reduce children's exposure include:

- Don't allow food to come in contact with CCA-treated timber play equipment.
- Make sure that children wash their hands after playing outside, and before eating and drinking.

There is no need to remove existing CCA treated timber play equipment from your backyard. It is unknown whether painting or sealing CCA-treated timber play equipment is helpful. If you are planning to build play equipment on your property, talk to the staff at your local hardware store for information and guidance about other treated timber products.

### **CCA-treated timber and fire**

Do not burn CCA-treated timber in fireplaces, barbecues, wood stoves or any wood fire.

In the event of a bushfire, the ash from burnt CCA-treated timber can contain up to 10 per cent (by weight) arsenic, chromium and copper.

Swallowing only a few grams of this ash can be harmful. Symptoms can include nausea, vomiting, diarrhoea and a 'pins and needles' feeling in the skin. Keep children and pets away from CCA-treated ash until it is removed, and see a doctor if you or anyone in your family shows signs of having eaten CCA-treated ash.

Ash from CCA-treated timber can be double-bagged, sealed and taken directly to your local landfill. When removing CCA treated timber ash, wear protective gloves, disposable overalls, and a P1 or P2 face mask (P2 masks are sometimes referred to as N95 masks) to minimise exposure to dust. Do not bury CCA treated timber ash.

Contact your local council for advice or requirements.

### **Risk reduction strategies for ACC-treated timber**

Suggestions to reduce risk include:

- Wash your work clothes separately after cutting or sanding CCA-treated timber.
- Don't use CCA timber for kitchen cutting boards, kitchen countertops or food containers.
- Never burn CCA-treated timber in fireplaces, barbecues, wood stoves or any wood fire.
- Don't use CCA-treated timber sawdust in mulch, compost or animal feed.
- Don't leave CCA-treated timber where others may take it and use it for firewood – for example, don't put it out on your nature strip.
- Small amounts of CCA-treated timber off cuts can be placed into your regular rubbish bin. CCA-treated timber from larger household building or demolition jobs can be disposed of at approved landfill sites. Contact your local council for further information.
- Be guided by the relevant timber associations but, generally speaking, it may not be advisable to use CCA-treated timber for animal cages if the animal likes to chew on wood – for example, for bird cages.
- Don't use CCA-treated timber in the construction of fish ponds.

### **Alternative timber treatments**

Arsenic-free alternative timber treatment products are available and registered for use in Australia. These products control a similar range of pests to CCA treatments. Ask your local hardware store about alternatives that are suitable for your intended project.

### **Where to get help**

- Your doctor
- Your local council
- Your local hardware store – for advice on alternative timber treatment products
- Environment Protection Authority (EPA) Victoria Tel. (03) 9695 27777 – for information about the disposal of CCA treated timber
- Victorian Department of Education and Early Childhood Development Tel. (03) 9637 2000 – for information about CCA treated timber equipment in schools, childcare facilities and kindergartens
- Victorian Department of Primary Industries, Chemicals Standards Branch Tel. 136 186 – for information on CCA-treated timber use in agriculture, and animal health risks.

### **Things to remember**

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**This page has been produced in consultation with and approved by:**

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