



TIMBER & HARDWARE

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SAFETY AND CCA TREATED TIMBER

Timber treated with copper-chromium-arsenic (CCA) preservatives is resistant to fungal decay and insect attack. This resistance to fungi and insects allows treated timber to be used in a wide variety of end uses that are not suitable for untreated timber.

Long-term protection of timber, using CCA preservatives, can only be achieved by commercial timber treatment plants, using vacuum pressure equipment.

Typical uses of CCA-treated timber are seen in the familiar green coloured timber of playground equipment, landscaping timbers, outdoor furniture, decking and swimming pool surrounds.

Timber preservatives have been safely used for more than 30 years in Australia. However, questions are sometimes asked about the safety of CCA-treated timber, especially because of the presence of arsenic.

How safe are children when playing on CCA-treated playground equipment? How safe are livestock in paddocks fenced with treated fenceposts? How safe are workers continually handling treated timber?

Many reports have been written overseas and in Australia during the past 40 years from medical, in-service and experimental studies on CCA-treated timber. All have shown that the treated timber does not pose a hazard to humans or livestock. The reason for this is that the copper, chrome and arsenic components of CCA preservatives react chemically with the timber, making them virtually insoluble.

Concern has been expressed that continual contact with CCA-treated timber surfaces may result in arsenic being rubbed off onto the body. Experiments involving washing and gentle scrubbing of the surface of treated timber showed that any health hazard from residues scrubbed from the surface was very low. The levels of arsenic encountered were less than eaten (approximately 1 mg) in a daily diet containing salt, milk, drinking water, meat and vegetables. An average meal of seafood may result in a daily uptake of 4-5 mg of arsenic. In New Zealand, sheep were fed with fodder containing CCA-treated timber for more than 25 days, with no adverse effects. It has been estimated that a child would need to eat at least 10 cubic centimetres of treated wood at one time to achieve a toxic dose of arsenic.

To be absolutely sure that no preservative deposits are present on CCA-treated timber surfaces, it is recommended that freshly treated timber be left for six weeks and then thoroughly hosed down before use. Leaving the timber stand for six weeks gives ample time to ensure that the treatment chemicals are fixed into the wood in their insoluble form. Tests have shown that this post-treatment handling leaves the timber completely safe.

CCA-treated timber poses no hazard to workers who are continually handling it, providing normal precautions are taken such as wearing gloves, and washing hands and face before eating, drinking and smoking.

Precautions should also be taken when sanding CCA-treated or untreated timber, as timber particles may be inhaled and lodge in the lungs, causing irritation. Operators using sanders should work in well-ventilated areas, and wear protective masks and clothing, including gloves. These precautions should be taken whether the timber is treated or not.

Under no circumstances should waste CCA-treated timber be burnt in cooking fires, stoves, barbecues or indoor fires. If burning must be done, it should be in small quantities in an open area. People and animals must be kept out of the smoke, and ash must not be allowed to get into water supplies.

Burning CCA-treated timber gives rise to two problems. The first is that arsenic is vaporised from the timber and is present in the smoke. This may be inhaled with toxic effects. Meat exposed on a barbecue may become contaminated with arsenic should CCA-treated timber be used in the fire. Secondly, the toxic chemicals become concentrated in the ash and are partially converted into the water-soluble forms. Small amounts could be toxic to children and pets and could also pollute water supplies.

Precautions are needed in disposing of CCA-treated timber waste and offcuts. A safe method of disposal of this material is to bury it in a local government dump site.

Summary

- Playground equipment made from CCA-treated timber does not pose any health hazard to children, providing it has been left for six weeks after treatment to allow complete fixation of the chemicals, and providing it has been hosed down before use.
- Fencing constructed from CCA-treated timber does not pose any health hazard to animals, providing it is also left for six weeks and hosed down before use.
- Burning CCA-treated timber in barbecues, stoves, cooking fires and indoor fires is dangerous.
- The safest way to dispose of CCA-treated wood waste is to bury it in a local government dump site.