

# TREATED AND CONTAMINATED FIREWOOD



THE FIREWOOD ASSOCIATION  
OF AUSTRALIA INC.

## Chemical fumes

Although all wood will burn, not all wood is safe to burn. When wood that has been chemically treated with preservatives or contaminated by other substances is burnt it can give off fumes which may be harmful, or even fatal. This is especially so when this type of wood is burnt in an open fire, brazier or chiminea, or used as barbeque fuel to cook food.

## How to identify treated timber

Common sources of treated wood that might be used as firewood are old building and fence materials and offcuts of timber from building construction. Other sources can be old power poles, sleepers and wharf or bridge timbers. Finding out whether timber has been treated is easy for some preservatives, but more difficult for others. For example, the common preservative CCA (copper chrome arsenic) has a distinct green colour, but this fades with time so it might not be obvious on the outside of the timber. Generally any softwood (pine) that has been in the open for more than a year and has not rotted will have been preservative treated.

Any hardwood such as power poles which have intact sapwood (the outside of the tree) will also have been treated. Inhalation of the fumes from burning CCA treated wood can be fatal. Another common preservative is creosote. This is derived from oil, is black in colour and has a distinctive tar like odour. Fumes from creosote are very toxic. Some of the newer timber preservatives, such as ACQ (ammonia-copper-quatarnary) and TBTN (tri-butyl-tin) are harder to detect in wood as they are not highly coloured. As a general rule you should be suspicious of any old or waste timber that you cannot confirm as being untreated.

## Contaminated timber and rail sleepers

Timber can be contaminated by substances applied to its surface either intentionally or unintentionally. Intentional contamination can be from paints, stains or lacquer, unintentional from insecticides and herbicides or from oil, grease etc dropped onto the timber. Many old paints contain lead, which gives off toxic fumes when heated. Old rail track sleepers are contaminated from oil and grease dripping from the trains. Many of these contaminating products contain heavy metals such as chrome, which are harmful if breathed in as fumes.

Even though many organic contaminants such as insecticides, greases and oils are denatured or destroyed if burnt in a hot fire, wood added to fire does not instantly combust at full temperature. As contaminated wood is heating up to combustion temperature the contaminants are released as fumes. These fumes will spread into the room from an open fire and will obviously contaminate any food cooked with the fire. Fumes can even escape from sealed combustion heaters. It is these fumes that can be smelt when old sleepers or painted wood is burnt. Any neighbours and nearby wildlife such as birds who breathe in these fumes may also suffer toxic exposure.

Non-flammable contaminants such as asbestos, which could be on old rail sleepers and old house framing timber, as well as some heavy metals such as molybdenum, can collect and concentrate in the ash bed of the fireplace. These substances are well known to have toxic effects if inhaled as dust, which is hard to avoid when emptying out the fireplace.

While the lure of free firewood from old building material, or cheap firewood from old rail sleepers might be appealing, it is not worth risking your own health or that of your family and neighbours, just to save a few dollars. If you are not certain whether a piece of wood has been treated or contaminated do not burn it. Never ever burn old rail sleepers as firewood.

Look for the distinctive FAA membership logo which is displayed by FAA members or call **1300 131 481** for your nearest member.

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