New Generation of Pressure Treated Wood

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In 2004 the US Environmental Protection Agency (EPA) banned the use of the chemical chromated copper arsenate (CCA) to preserve wood for residential use. CCA treated wood is still available for use as permanent wood foundations and industrial uses.

For generations, wood for outdoor use has been treated with chemicals in a pressure process to discourage insects, mold and rot. CCA was commonly used to preserve wood used outdoors, and extend the life of decks, walkways, fences, gazebos, boat docks and playground equipment. New EPA-approved chemicals without arsenic have replaced CCA for home and garden use.

CCA poses certain environmental and health risks, including the leaching of chemicals like arsenic and chromium into the soil and environment, and the risk of exposure to these and other hazardous chemicals. For example, over a period of time, rain can leach arsenic from CCA-treated wood and potentially result in arsenic levels in the underlying soils, which might not be safe. Disposal of treated wood also proves to be an issue, particularly disposal by incineration.

A new generation of EPA-approved chemicals without arsenic have replaced CCA for home and garden use, and wood treated with these preservatives is available in the marketplace. Most of the new chemicals rely on copper, which isn't cheap. So to keep the cost reasonable, lumber is now treated according to its intended use, with the copper content in the preserving chemicals varying from around 20 to 95 percent. The price also varies accordingly. Other preservative treatments rely on borate rather than copper.

While the new generation of chemicals won't bring arsenic into your garden, they may pose other problems. The higher copper content also makes them more corrosive to some metals, so do some homework before you build. Before you buy, know how you will use the wood. Tags listing appropriate end-use categories are stapled to the ends of the boards. For instance, wood labeled "Decking" is treated to a lower (and consequently less expensive) level of protection than wood labeled simply "For Above Ground Use." The type of preservative is also listed on the tag, or you can contact the manufacturer for additional information on the type of preservatives used in their products.

Non-arsenic containing hardwoods such as cedar and redwood, wood composites, and non-wood alternatives such as metals and plastics, are all excellent substitutes for pressure treated wood.

Pressure Treated Wood in Your Garden

Many people wonder about the safety of using pressure-treated-wood raised garden beds to grow vegetables or fruits. A study conducted by University of Minnesota found that vegetable crops grown in CCA-framed garden beds can accumulate chemicals from treated wood, but based on U.S. Public Health Standards, these vegetables would be safe for human consumption. To be on the safe side, you can line garden beds with plastic sheeting on the base and sides of the bed to separate the wood from the soil.

Tips to Reduce Risk:

- To minimize leaching, regularly apply a sealant to CCA-treated wood, as recommended by the wood manufacturer. Sealants also reduce the amount of arsenic that repeated or prolonged contact with the wood can leave on the skin.
- If possible, discourage children from playing under decks.
- Put a heavy layer of sand in areas where children play under CCA-treated wood. Arsenic doesn't bind to sand. Any arsenic leached from above in rainwater washes through the sand and binds to the soil underneath.
- Wash children's hands when they're through playing. Be sure small children don't habitually put their mouths on the wood or eat the soil.
- Wash your hands after working with CCA-treated wood.
- Don't burn CCA-treated wood.
- Don't use CCA-treated wood for bark or mulch.
- Take precautions when sanding or sawing CCA-treated wood. See the EPA's Consumer Safety Information Sheet on using CCA-treated wood.

Sources:

- Environmental Considerations of Treated Wood National Park Service – Pacific West Region, www.doi.gov
- "New generation of pressure-treated wood is safer for home use.", Davi Richards, Carol Savonen; June 29, 2007, Corvallis, Ore.; NPIC
- "Pressure Treated Wood: Answers & Questions", www.mass.gov