

What is pressure treated wood?

Pressure treated wood is wood that has been treated with a preservative to protect it from being destroyed by insects, fungus or exposure to moisture.

What preservatives are used to pressure treat wood?

The preservatives formerly used to pressure treat wood for non-commercial applications are chromium, copper and arsenic, which are classified as pesticides. Wood treated with these pesticides is sometimes referred to as CCA treated wood, and is commonly used for decks, walkways, fences, gazebos, boat docks and playground equipment. The U.S. Environmental Protection Agency (EPA) has registered a number of alternate wood preservatives that do not contain arsenic. Wood treated with these preservatives is now available in the marketplace. How are children exposed to arsenic from pressure treated wood?

When was pressure treated wood found to present health risks?

EPA began investigating the risks associated with the use of pressure treated wood in the year 2000. Arsenic has been associated with lung and skin cancer and is acutely toxic.

The draft preliminary risk assessment demonstrated an increased risk of cancer for children who regularly played on pressure treated play sets, and a greater increased risk for children who also were exposed to pressure treated decks in the home. In cold climates like Massachusetts, the mean lifetime risk of cancer to children who use play sets made of pressure treated wood ranged from 1.2 cases per 100,000 to 2.2 cases per 100,000 for children who also had a pressure treated wood deck. In warmer climates where children can be exposed for more days throughout the year the risk increased to 2.3 cancers in 100,000 for children with play sets only, to 4.2 per 100,000 if an outdoor deck is also present. Children who contacted play sets only had half the absorbed dose of children who contacted play sets and decks. For children who contacted both play sets and decks, the total mean dose was reduced by a third when hand washing occurred after exposure. Arsenic that leached from the play sets to the soils underneath was included in the assessment of exposure.

EPA's draft preliminary childhood risk assessment takes into consideration variations in exposure due, for example, to climate, weathering of the wood play structures, whether the child also spends time on a pressure treated wood deck, and months of the year that outdoor play occurs.

Risks associated with exposure to chromium, and non cancer risks from arsenic are incorporated in the study. EPA noted that uncertainties exist in the risk assessment, including uncertainty in the toxicity of arsenic, the level of arsenic residue on the surface of the wood, the amount of arsenic absorbed, etc.

In February 2003, the United States Consumer Product Safety Commission (CPSC) released the results of its studies examining decks and play sets made from pressure treated wood. Because arsenic is thought to be the most potent of the three substances in pressure treated wood, the CPSC risk assessment focused only on this substance. The research concluded that a young child who plays on pressure treated playground structures for an equivalent of 156 hours per year, or three times per week, over a five-year period has an increased risk of developing lung or bladder cancer in his or her lifetime.

Have the manufacturers of pressure treated wood been required to stop production of the wood?

No. Manufacturers of pressure treated wood reached a voluntary agreement with EPA to end the manufacture of pressure treated wood for most consumer applications by December 31, 2003. EPA has indicated that some stocks of wood treated with CCA before this date might still be found on shelves until mid-2004. Pressure treated wood will still be available for certain commercial applications, such as wharves and bridges, where little human contact would occur. Learn more about the EPA agreement with pressure treated wood manufacturers.
How do I know whether my play set or deck is made of pressure treated wood?

You can usually recognize pressure treated wood by its greenish tint, especially on the cut end, and staple-sized slits that line the wood. However, the greenish tint fades with time, and not all pressure treated wood has the slits.

How can I lessen the risk from exposure to arsenic from pressure treated wood?

To minimize the risk of exposure to arsenic from pressure treated wood wear impervious gloves, avoid direct skin contact, avoid contact with clothing. Do not saw, cut, burn or break up pressure treated wood materials.

To reduce potential contact with soil that may have elevated arsenic beneath a play set, consider covering the ground with sand, pea stone or rubber chips. The sand, pea stone or rubber chips will prevent contact with the soil and inhibit the generation of dust or the tracking of dirt. Arsenic does bind to bark mulch, making it a less desirable soil covering beneath pressure treated wood.

An alternative to soil testing is to cover the soil that may have elevated arsenic to reduce potential contact. Sand, pea stone or rubber chips will prevent contact with the soil and inhibit the generation of dust or the tracking of dirt into your home. (Refer to above question, How can I lessen the risk from exposure to arsenic from pressure treated wood?).

If you decide to test your soil, consider consulting an environmental professional or another person qualified to plan the sampling and interpret the results.

If I test the soil, does California EPA have arsenic soil standards?

Yes a special laboratory Certification is required for Treated Wood material.

If I want to remove the soil, what do I do with it?

There are regulations that govern what can be done with soil that contains elevated levels of metals, such as arsenic, or other chemical constituents. See . These regulations also specify rules for documenting the relocation of soil and where it can be disposed. If you want to remove soil from beneath your play set, you will need to have it tested if before taking it off your property. The concentrations of arsenic in the soil will determine what options there are for reusing it at another location. Depending on the arsenic levels, the soil may be acceptable for reuse at a landfill, as cover material. You should consult an environmental professional if you are considering removing contaminated soil from your property.

Will raised garden beds made from pressure treated wood contaminate my garden?

Plants can take up arsenic from the soil, so it may not be a good idea to use pressure treated wood in gardens. Use arsenic-free alternatives. If you cannot replace raised garden beds with arsenic-free alternatives, peeling root crops or scrubbing with a brush and water helps remove arsenic-contaminated soil that sticks to the vegetables. As an added precaution, line the inside surface of the pressure treated frame with plastic.

Should I take any other precautions when I work with pressure treated wood?

When working with pressure treated wood: wear gloves when handling wood, wear goggles and a dust-mask when sawing and sanding, always wash your hands before eating, and never burn pressure treated wood.

What should I use in place of pressure treated wood?

Non-arsenic containing hardwoods such as cedar and redwood, wood composites and non-wood alternatives such as metals and plastics, are excellent substitutes for pressure treated wood. The EPA has registered a number of alternate wood preservatives that do not contain arsenic. Wood treated with these preservatives is available in the marketplace. Prior to purchasing treated wood, you may wish to seek additional information on the type of preservatives used from the manufacturer.

EPA 2001. Sampling for Residues of Arsenic, Chromium, and Copper in substrates (Soils/Buffering Materials) Beneath/Adjacent to Chromated Copper Arsenate (Pressure)-Treated

Playground Equipment. U.S EPA Office of Pesticide Programs, Antimicrobials Division,
Washington, DC.