

Pressure-Treated Wood Use in Playground Equipment

Preserved and pressure-treated woods can provide some opportunities for exposure to wood treatment substances. This may raise concerns about toxicity.



Do not use wood treated with creosote or pentachlorophenol (PCP). Arsenic-treated wood (the least acutely toxic) should meet the American Wood Preservers' Association commodity standard. Use a supplier that guarantees this standard. The Material Safety Data Sheet (MSDS) for the wood treatment substance can be obtained from the supplier. The MSDS is a summary of properties, health effects, protective precautions used to reduce exposure, and spill cleanup procedures.

PRECAUTIONS

The following precautions, if followed, should significantly reduce or eliminate exposures to arsenic residues from arsenic-treated wood.

- Children should not be exposed to preserved or pressure-treated wood or its dust during construction. Adults should use special precautions in handling pressure-treated wood when constructing the playground or play structures.

- For all wood treatment substances, including arsenic, double coat the pressure-treated wood with an appropriate non-toxic, non-slippery wood sealant, such as an oil-based stain. Reapply every two years
- Do not place food, drink or paper products used for eating on preserved or pressure-treated wood products that have not been properly sealed. Children and staff should wash their hands immediately after playing on wooden playground equipment that contains preservatives.
- Do not use wood that shows signs of crystallization or resin on its exterior. Use only clean pressure-treated wood.
- Inspect structures for wood decay and/or structural weakness regularly. If the pressure-treated wood cracks to expose the interior, but the wood is still structurally sound, apply a double coat of non-toxic, non-slippery wood sealant to the affected area.
- If there are still concerns about using pressure-treated wood, alternatives to consider include: cedar, redwood, painted metal, or plastic.

TYPES OF PRESSURE-TREATED WOOD

The most commonly used substances that are or may have been used for playground structures are Pentachlorophenol (PCP), Creosote, Arsenic and related compounds, and CCA. CCA contains Arsenic Pentoxide, Copper Oxide, Chromium (III) Oxide or different related compounds. Other wood preserving substances used are Copper Napthenate, Zinc Napthenate,

Copper-3, Niodox-10 (contains Boric Acid), and EThylene Glycol. The least acutely toxic are Copper Napthenate, Zinc Napthenate, Copper-8, Niodox-10, and Arsenic. *Creosote and PCP are the most acutely toxic.* Playground structures and other home-based structures built from pressure-treated wood are most likely to be of the CCA type.

ROUTES OF ENTRY

Toxins may enter the body through the skin or by ingestion. Ingestion occurs most frequently when contaminated hands are put into one's mouth or contaminated hands are used on food that is being eaten. Splinters piercing the skin are a more questionable means of entry. Wood is an irritating substance. Different woods have different degrees of irritation. The combination of chemical and wood irritation may lead to an adverse reaction.

HEALTH EFFECTS OF EXPOSURE

Some effects that can be associated with pressure-treated wood are an irritation of skin, eyes, nose or throat. In the manufacturing or construction process there may be an increased risk of cancer due to significant or prolonged exposure. Available sampling data related to the use of CCA-treated wood indicate low but detectable amounts of arsenic residue released from such structures. However, under typical use these amounts of arsenic would not be expected to present unusual health concerns. It is important to note that any exposures can be reduced or eliminated by following the precautions described above.

CURRENT REGULATORY ACTIVITIES

The agency responsible for regulating the use of chemicals used in pressure-treated wood is the US Environmental Protection Agency (EPA). EPA reviews toxicity and exposure information on these products before allowing them to be used. EPA periodically reviews new scientific information for registered products to determine if there is a need for change in the regulatory practices.

For More Information

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