

Wood Preservative 101: Frequently Asked Question (FAQ)

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Abstract

This poster presents basic information on treated wood particularly CCA (Chromated Copper Arsenate)-treated wood. The primary objective of this presentation is to provide beneficial information to those who are not familiar with treated wood.

Preservatives are used to protect wood from organisms, such as fungi and insects that attack untreated wood, and natural weather conditions, for example, rainfall, sunlight, and seawater that may increase the vulnerability of the wood subject to biological attack. Thus, the life of the wood expands by the addition of preservative chemicals. There are various wood preservatives available in the commercial market and the CCA-preservative is one of them. Dr. Sonti Kamasan, of India, was the first person to develop a CCA product in the 1930s. Because of the effectiveness of the CCA-preservative, the use has grown worldwide. Commercialization of CCA-treated wood began in the 1960s and by 1980s, the CCA-preservative became the most popular product in the U.S.

While the CCA-preservative effectively protects the wood from degradation, some issues have been raised recently, in particular with respect to health concerns. Since arsenic in CCA-treated wood is highly toxic, it leaves chance to affect those who come in contact with the CCA-treated wood. Most of the recent concerns focus on possible children's exposure to arsenic when playing on CCA-treated playgrounds. Other possible exposure routes may include contamination of food placed on CCA-treated picnic tables and possible ingestion due to hand-to-mouth activity after contact with CCA-treated wood. Though the dosages might be too small to cause acute health effects, it could possibly result in health effects in the long term.

Many countries have placed restrictions on the usage of CCA, such Japan and some European countries. In some countries CCA has been banned. In Germany, Switzerland and Vietnam, CCA has either never been used or has not been used in significant quantities. Although there are many countries that are trying to place restrictions on the use of CCA, it is still the commonly used preservative world wide. In the United States, beginning January 1, 2004 CCA will not be treated for residential use.

Because of health concerns, it is useful to identify if a wood is treated with CCA or not. However, identification of CCA-treated wood for the general public is not commonly known. Visual identification is difficult. The green color of treated wood could show that wood may have been treated with copper but such identification is not always obvious. Identification can be done by using chemicals such as PAN indicator stain, ascorbic acid stain, and an arsenic test kit. These require relatively simple procedures. The most advanced technologies are those that utilize x-ray fluorescence. X-ray fluorescence analyzers are easy to use and provide the concentration of 12 different metals in a target wood in about 1 second but the cost of the instrument is high (\$30,000 U.S.).