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Fact Sheet on Chromated Copper Arsenate (CCA) Treated Wood

May 2005

This document provides an update on Chromated Copper Arsenate (CCA) used as a preservative for wood. Health Canada's Pest Management Regulatory Agency (PMRA) and the United States Environmental Protection Agency (U.S. EPA) continue to work together towards completing the re-evaluation of CCA. The re-evaluation is expected to be completed in 2006, at which time this fact sheet will be updated to reflect the conclusions of the re-evaluation.

What is CCA and where is it used?

CCA is a preservative containing arsenic, chromium and copper. It is used for the long-term protection of wood against attack by fungi, insects and marine borers. Applying wood preservatives extends the productive life of wood, and helps reduce demand for forest resources. CCA-treated wood was commonly used in residential construction such as playground structures, fences, gazebos and decks. It is still used for industrial uses such as utility and construction poles, marine timbers and pilings.

Has CCA-treated wood for residential use been discontinued?

The wood treatment industry in Canada stopped treating wood with CCA for use in residential applications December 31, 2003. Existing structures built from CCA-treated wood were not affected by this action.

CCA is still available to treat wood for industrial uses.

Are there alternatives to CCA-treated wood?

Naturally decay-resistant woods such as cedar and redwood are available. Depending on the application, non-wood alternatives such as plastics, metal, concrete, composite materials and outdoor fabrics can also be used.

Where the use of treated wood is preferred, currently registered alternative products include alkaline copper quat (ACQ) and copper azole. Talk to your wood retailer about the availability of these alternatives.

Does CCA-treated wood present health risks ?

While Health Canada and the U.S. EPA have not concluded that CCA-treated wood poses any unreasonable risk to the public or the environment, arsenic is a known human carcinogen. Health Canada believes that any reduction in the levels of potential exposure to arsenic is desirable.

As indicated previously, Health Canada's Pest Management Regulatory Agency (PMRA) and the U.S. EPA are actively co-operating to re-evaluate the potential human health and environmental risks of CCA. Current risk assessment methods are being employed in this re-evaluation, which include consideration of workers' exposure and a special focus on sensitive sub-populations such as children who may come in contact with treated wood.

In February 2003, the U.S. Consumer Product Safety Commission (CPSC) released a risk assessment of CCA-treated wood on playground structures. This assessment concluded that children playing on playground equipment built with CCA-treated wood may have a slightly increased risk of developing cancer. However, at that time, no further action was recommended by the CPSC. The CPSC report is available on its website, www.cpsc.gov/.

The PMRA and U.S. EPA released a preliminary risk assessment on children's exposure to CCA-treated wood in November 2003 (see Re-evaluation Note [REV2003-07](#)). It is currently being finalized.

The PMRA and U.S. EPA re-evaluation of CCA-treated wood is expected to be completed in 2006. This involves a rigorous and complex scientific assessment that considers all relevant information, including the CPSC report. The re-evaluation is using the most advanced methods available, and will be the most comprehensive risk assessment available for determining the potential risks to children posed by arsenic exposure from CCA-treated wood. This approach taken by the PMRA and U.S. EPA is based on recommendations from meetings of the U.S. EPA Scientific Advisory Panel in 2001 and 2003. The Scientific Advisory Panel includes researchers and academics who have expertise in the specific area of interest.

The regulatory agencies are also continuing to investigate the effectiveness of coatings in reducing any potential risk associated with CCA-treated wood.

How can I tell if my deck has been constructed with CCA-treated wood?

Treated wood, if not coated, has a greenish tint which fades over time. Prior to the voluntary discontinuation of CCA-treated wood for residential uses, CCA had been the principal chemical used to treat wood for decks and other outdoor uses around the home. Generally, if your deck has not been constructed with redwood or cedar, then the deck was probably constructed from CCA-treated wood if it was built before the summer of 2003. Alternatively, if you know who constructed the deck, you may want to contact them and ask.

Wood treated with the new copper-based wood preservatives looks the same as CCA-treated wood. Whenever using and handling any treated wood, it is good practice to follow the same precautions as recommended for CCA-treated wood.

Does arsenic leach out of treated wood?

Scientific studies suggest that arsenic, over time, slowly leaches from CCA-treated wood products. The amount and rate at which arsenic leaches depends on many factors including the species of wood, amount of rain, the acidity of the rain and soil in contact with the wood, and the age of the structure. In general, the concentration of arsenic in soil leached from treated wood decreases rapidly within a short distance from the treated wood. Small amounts of arsenic may also be dislodged from the surface of wood.

Is it safe for children to play on structures made with CCA-treated wood?

As part of its re-evaluation of CCA, the U.S. EPA and the PMRA are working together to conduct a thorough scientific assessment of risks to children playing on CCA-treated wood, which takes into account any special sensitivities they may have and unique behaviours, such as hand-to-mouth transfer. As noted earlier, this re-evaluation is targeted for completion in 2006.

As always, parents should manage risks to their children and follow basic good hygiene practices such as washing hands thoroughly after activities involving contact with various surfaces and materials including treated wood, animals and soil, especially prior to eating and drinking.

Do I need to remove my existing structures built from CCA-treated wood?

At present, the PMRA has not concluded that CCA-treated wood poses any unreasonable risk to public health or the environment and is therefore not recommending removal of existing structures. Concerned citizens may want to take extra precautions, by applying a coating to exposed surfaces on a regular basis (see below for more information on coating structures).

What types of coatings are most effective?

If consumers have concerns about existing CCA-treated wood structures on their property (e.g., decks or fences), they may consider applying a coating to the wood. Preliminary results from studies conducted by the U.S. EPA and the U.S. Consumer Product Safety Commission on the effectiveness of commercially available sealants in reducing or eliminating the potential of arsenic exposure from contact with the surfaces of CCA-treated wood, indicate that application of penetrating coatings to CCA-treated structures at least once a year can reduce exposure to arsenic.

Oil- or water-based stains that can penetrate wood surfaces are preferable to products such as paint. This is because paints and other film-formers can chip or flake, requiring scraping or sanding which can increase exposure to arsenic. Consumers should consider the required preparation steps (e.g., sanding, power washing, etc.) before selecting a product to minimize potential exposure to arsenic, both for initial application and re-coating. Further information on the coatings that produce the greatest reduction in dislodgeable arsenic over the longest time period will be available upon completion of the sealant study.

Additional information on the sealant studies are posted at the U.S. EPA's website at www.epa.gov/pesticides and the CPSC's website at www.cpsc.gov.

Food contact surfaces/picnic tables

Do not put food in direct contact with CCA-treated wood. When eating at picnic tables, ensure that food is consumed from plates and not directly from the surface of the table or consider using a plastic table cloth as a barrier.

What precautions should I take when working with CCA-treated wood?

Basic precautions to be taken when working with CCA-treated wood are:

- Wear gloves and long sleeves when handling treated wood.
- Wear a dust mask, eye protection, gloves and long sleeves when sawing, sanding, shaping or otherwise machining treated wood to avoid skin contact with or inhalation of sawdust.
- Saw, sand and machine CCA-treated wood outdoors.
- Wash hands and other exposed skin after contact, and before eating, drinking or smoking.
- Wash clothes before re-wearing. Wash separately from other clothing.
- After construction, all end-cuts, sawdust and construction debris should be cleaned up and disposed of in accordance with local regulations.

What should I do if I suspect poisoning from working with treated wood?

Unless you are exposed to burning treated wood which creates an inhalation hazard, it is unlikely that working with treated wood would result in enough exposure to cause symptoms (see precautions above). However, if you do suspect poisoning, you should seek medical attention.

Can CCA-treated wood be used in direct contact with drinking water?

No. The use of CCA-treated wood in direct contact with drinking water is unacceptable.

Can sawdust or 'chipped' wood from CCA-treated wood be composted or used for mulch?

No. Do not compost or mulch sawdust or remnants from CCA-treated wood.

Can I burn CCA-treated wood?

No. Burning CCA-treated wood is unacceptable. Burning this wood concentrates and releases the preservative chemicals in the ash and smoke of a fire. Additional information on the proper handling and disposal of preservative-treated wood products can be found at www.ccasafetyinfo.ca.

What are the environmental hazards or concerns associated with CCA?

The environmental hazards of CCA-treated wood are related to the high toxicity of copper, chromium and arsenic to non-target organisms in freshwater and marine environments. The potential risk depends on the exposure, i.e., the amount of CCA being leached from treated wood into the aquatic ecosystem, directly or indirectly.

In general, small ground-based structures made from CCA-treated wood that is properly treated and fixed are unlikely to cause any environmental hazard. Preliminary results from studies indicate that sealants can reduce surface dislodgeability of the preservative

chemicals. These data are being considered as part of the CCA re-evaluation. The environmental risk of CCA-treated wood coming into contact with freshwater and marine environments (including wetlands) is greater than in terrestrial environments and possible restrictions on aquatic use are currently being assessed.

Additional Information

Consumer Information

Environment Canada and Health Canada have cooperated with the wood treatment industry to develop a comprehensive labelling and bilingual public information/education program which includes a Consumer Information Sheet, a toll-free number for consumer information (1 866 679-0957), a website (www.ccasafetyinfo.ca) and a program to tag individual pieces of lumber, bundles of lumber and bins and racks with information.

The Strategic Options Process for the wood preservation sector (Environment Canada)

www.ec.gc.ca/toxics/wood-bois/index_e.htm

This website provides information about the Strategic Options Process (SOP) for managing potentially toxic environmental contaminants that are used within the Canadian wood preservation industry. The site also provides an update on the progress that has been achieved by all stakeholders (e.g., wood preservation manufacturing and treatment sector, federal and provincial governments, public interest groups and academia) involved in implementing the recommendations developed from the SOP.

Pest Management Information Service

The Pest Management Information Service is a federal government initiative to provide information on pesticide regulation and registered pesticides.

Telephone: 1 800 267-6315 within Canada
(613) 736-3799 outside Canada (Long distance charges apply)

E-mail: pmra_infoserv@hc-sc.gc.ca

Internet: www.pmra-arla.gc.ca

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Health Canada – Pest Management Regulatory Agency (PMRA) Web resources

PMRA-ARLA (English):

www.pmra-arla.gc.ca

CCA Fact Sheet:

www.pmra-arla.gc.ca/english/pdf/fact/fs_cca-e.pdf

PMRA Publications:

www.pmra-arla.gc.ca/english/pubs/pubs-e.html

Fact Sheet on the PMRA:

www.pmra-arla.gc.ca/english/pdf/fact/fs_pmra-e.pdf

PMRA-ARLA (French):

www.pmra-arla.gc.ca

ACC Fiche Technique:

www.pmra-arla.gc.ca/francais/pdf/fact/fs_cca-f.pdf

Publications de l'ARLA:

www.pmra-arla.gc.ca/francais/pubs/pubs-f.html

Fiche Technique sur l'ARLA:

www.pmra-arla.gc.ca/francais/pdf/fact/fs_pmra-f.pdf

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