



SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: Chromate-Copper-Arsenate
 SYNONYM: CCA Treated Wood
 PRODUCT USE: Treated Wood Products
 CHEMICAL FAMILY:
 PROPER SHIPPING NAME:
 DOT HAZARD CLASS:

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY

HAZARDOUS COMPONENT(S)	OSHA PEL	ACGIH TLV	ACGIH STEL	% APPROX	CAS. NO.
Chromium (III)	1.0 mg/M ³	0.5 mg/M ³		<2**	7440-47-3
Arsenic (V)	0.01 mg/M ³	0.01 mg/M ³		<2**	7440-38-2
Copper	1.0 mg/M ³	1.0 mg/M ³		>2**	7440-50-8
Wood Dust* (regulated as a particulate)	15.0 mg/M ³ (total dust) 5.0 mg/M ³ (respirable fraction)	5.0 mg/M ³ (softwood)	10.0mg/M ³ (softwood)		none

SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: N/A
 VAPOR DENSITY (AIR = 1): N/A
 SOLUBILITY IN WATER: INSOLUBLE
 REACTIVITY IN WATER:
 APPEARANCE AND ODOR: Slightly green colored, no odor
 MELTING POINT: N/A
 SPECIFIC GRAVITY: (Water = 1) N/A
 VAPOR PRESSURE: N/A

SECTION IV - FIRE & EXPLOSION DATA

FLASH POINT: N/A
 METHOD USED: N/A
 AUTO IGNITION TEMPERATURE:
 EXTINGUISHER MEDIA:
 SPECIAL FIRE FIGHTING PROCEDURES:
 UNUSUAL FIRE AND EXPLOSION HAZARDS:

FLAMMABLE LIMITS in AIR % by VOLUME: N/A
 LEL: N/A
 UEL: N/A

Use water, dry chemical, or other common extinguishing media
 Fire from a separate fuel source may be intense enough to cause thermal decomposition releasing harmful fumes and/or gasses including oxides of carbon and nitrogen. Wear complete fire service protective equipment, including full-face NIOSH-approved self-contained breathing apparatus.
 High airborne levels of wood dust may burn rapidly in the air when exposed.

SECTION V - PHYSICAL HAZARDOUS (REACTIVITY DATA)

STABILITY:**CONDITIONS TO AVOID:**

none known

INCOMPATIBILITY (MATERIALS TO AVOID):

strong acids, open flame and oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS:

Contact with strong acid may release metals. Combustion products may include smoke, oxides of carbon and nitrogen, chrome, copper and arsenic. The metals may remain in the ash if the wood is burned.

HAZARDOUS POLYMERIZATION:

Does not occur

SECTION VI - HEALTH HAZARDS

ACUTE TOXICITY:

Inhalation: Airborne treated or untreated wood dust may cause nose, throat or lung irritation and other respiratory effects. Burning treated wood can release toxic metals into ash and possibly smoke. Various species of untreated wood dust can elicit allergic respiratory response in sensitized persons.

Skin: Handling wood may result in skin exposure to splinters. When there is prolonged and/or repeated direct contact with treated or untreated wood dust, mild, transient irritation may occur. Various species of untreated wood dust can elicit allergic contact dermatitis in sensitized individuals.

Eyes: Treated or untreated wood dust may cause mechanical irritation.

Ingestion: Not anticipated to occur. A single ingestion by a small child of a large amount (approximately 2.5 ounces or 6 cubic inches) of treated wood dust may require immediate medical attention.

CHRONIC TOXICITY:

Treated or untreated wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation.

The International Agency for Research on Cancer (IARC) classifies untreated wood dust, inorganic arsenic and hexavalent chromium as human carcinogens (see note). The wood dust classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures to untreated wood dust.

Note: Some forms of the components of the liquid preservative used to manufacture this product (arsenic and chromium) have caused lung, skin and possibly other cancers in humans occupationally or environmentally overexposed.

REPORTS OF THESE CANCERS DO NOT INCLUDE THE CCA-TREATED WOOD INDUSTRY OR THE USE OF CCA-TREATED WOOD.

WARNING: This wood contains chemicals known to the State of California to cause cancer. (This statement issued in accordance with California Proposition 65.)

CARCIOGENICITY:

IARC has classified untreated wood dust as a Group I human carcinogen.

IARC, the NTP, OSHA and California Proposition 65 do not consistently distinguish among arsenic or chrome species but list inorganic arsenic and chromium and certain chromium compounds as human carcinogens. Cancers in humans have followed from long term: consumption of Fowler's Solution, a medicinal trivalent arsenical; inhalations and skin contact with inorganic trivalent arsenical sheep-dust; the combined inhalation of arsenic trioxide (trivalent arsenical), sulfur

dioxide, and other particulates from ore smelting in arsenic trioxide production; and occupational exposure to nonwatersoluble hexavalent chromium.

EMERGENCY AND FIRST AID PROCEDURES:

<u>EYE CONTACT:</u>	Gently flush any particles from the eyes with large amounts of water for at least 15 minutes. DO NOT RUB THE EYES.
<u>SKIN CONTACT:</u>	Rinse skin free of material with water to avoid abrasion of skin. DO NOT RUB until skin is free of material then wash thoroughly with soap and water.
<u>INHALATION:</u>	Remove from wood dust exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen. Seek medical aid if symptoms persist.
<u>INGESTION:</u>	Rinse the victims mouth out with water. Induce vomiting only if directed by a physician or at the advice of a poison center.

NOTE TO PHYSICIAN: If one ounce of treated wood dust per 10 pounds of body weight is ingested, acute arsenic intoxication is a possibility.

SECTION VII - HANDLING PRECAUTIONS

Storage Conditions: Protect from physical damage. Maintain good housekeeping.

Caution: Do not burn treated wood. Whenever possible, sawing or machining treated or untreated wood should be performed outdoors to avoid accumulations of airborne wood dust.

Disposal Guidance: Dispose of in accordance with local, state and federal regulations. Treated wood may be disposed of by regular disposal based on the exemption under 40 CFR 261.4(b)(9). This product is not defined as a US-EPA hazardous waste under 40 CFR 261. State-run hazardous waste programs may be more stringent than the federal requirements.

SECTION VIII - USE SITE PRECAUTIONS

Study Abstracts

In Hawaii/ where over 45,000 homes have been built almost entirely of CCA-treated wood, a study was conducted by the Pacific Biomedical Center of the University of Hawaii (the Budy-Rashad study) in 1977 to determine any possible effect on the health of carpenters. The study concluded that exposure to CCA-treated sawdust is not associated with increased risk of total cancer, lung cancer or lymphatic cancer and shows that excess respiratory cancer mortality was not observed in the carpenters.

A study was conducted by the University of Alabama to evaluate the teratogenicity of CCA-impregnated sawdust when exposed to rabbits and mice. Sawdust from CCA-treated wood has been shown not to cause chromosome damage or teratogenicity in mice fed sawdust nor to cause birth defects in rabbits receiving sawdust applied to their skin.

A series of reports released in-1990 from the Consumer Product Safety Commission (CPSC) assessed the risk of cancer to children playing on CCA-treated wood playground equipment. Seven playground equipment samples were collected. The results of the study indicated the approximate risk of cancer from five samples was less than one in a million, a risk considered negligible. The remaining two samples yielded estimated risks of 3-4 in a million, also considered by CPSC to be a small risk.

A technical paper published in the Forest Products Journal (September, 1974) by Levi, Huisingsh and Nesbitt described a study conducted to determine if CCA wood preservative in grapevine support posts might be absorbed by the vines, leaves and/or grapes. This study concluded that "... CCA preservatives are bound in wood, are not readily leached and are not concentrated in plants growing close to the treated wood."

The Springborn Laboratories Environmental Sciences Division in 1993 conducted a sediment exposure study using leachate from CCA treated and untreated marine pilings and exposing *Ampelisca abdita* for a period of 10 days. Survival of the organisms during the 10-day exposure period was the biological endpoint used to establish the effects of exposure. Results indicated that leachate from treated pilings had no adverse effect on organism survival. It was concluded that the primary constituents of the CCA-treated wood piling were not present in the leachate at concentrations which would adversely affect the survival of the organisms.

Hickson Corporation conducted tests to evaluate treated wood used in raised vegetable gardens. Vegetables harvested from gardens in raised bed structures built of CCA-treated wood were compared with vegetables grown in untreated raised bed structures and with vegetables purchased at a local grocery store. Testing revealed that all vegetables contained minuscule amounts of each element in CCA. In some cases, the levels of metals were actually higher in the vegetables grown in untreated bins, and in one case the store-purchased vegetable had the highest level of arsenic. The report concluded that there was "no uptake of the metal constituents into the vegetables."

The Food and Drug Administration's (FDA) "Market Basket Survey" has consistently shown that arsenic in tomatoes is below the analytical level of detection despite the increased usage of arsenically-treated wood for tomato stakes. Moreover, even though CCA-treated wood has been increasingly used in applications such as cattle bunks and stalls and poultry brooders for the last ten years, the FDA survey has shown ~ decrease in the arsenic content of dairy, meat and poultry products.

A study funded in part by the National Oceanic and Atmospheric Administration (NOAA) and prepared by the Marine Resources Division of the South Carolina Department of Natural Resources in 1995 measured the impact of wood preservative leachate from docks in an estuarine environment. Copper, chromium, arsenic, and polynuclear aromatic hydrocarbons (PAHs) were measured in composite samples of sediments and naturally occurring oyster populations from creeks with high densities of docks, and from nearby reference creeks with no docks. Sediments from all but one site had metal and total PAH concentrations which were below levels reported to cause biological effects, and the oysters showed no significant difference in their physiological condition. Bioassays were also conducted on four common estuarine species and hatchery-reared oysters. The results suggest that wood preservative leachates from dock pilings have no acutely toxic effects on these common species, nor do they affect the survival or growth of juvenile oysters over a six-week period. In some cases, metal leachates may accumulate in sediments and oysters immediately adjacent to pilings, but do not appear to become concentrated in sediments or oysters elsewhere in the same creeks.

Important: *The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation, and verification. Atlantic Wood Industries, Inc., makes no warranty of any kind, express or implied, concerning the accuracy or completeness of the information and data herein. Atlantic Wood Industries, Inc., will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.*
