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## *Material Safety Data Sheet*

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MATERIAL SAFETY DATA SHEET                      K O P P E R S                      MEDICAL EMERGENCIES: 1 800 553-5631  
OUTSIDE U.S.A.: 412 227-2001  
GENERAL INFORMATION: 412 227-2424

KOPPERS INDUSTRIES, INC.  
436 SEVENTH AVENUE                      CHEMTREC ASSISTANCE 1 800 424-9300  
PITTSBURGH, PA. 15219-1800                      CANUTEC: 1 613 996-6666

### **SECTION I - PRODUCT IDENTIFICATION**

PRODUCT NAME: Chromated Copper Arsenate(CCA)Pressure Treated Wood+ET Oil

SYNONYM: CCA - Treated wood with oil emulsion

PRODUCT USE: Treated Wood

CHEMICAL FAMILY: NA

FORMULA: Chromated Copper Arsenate Preserved Wood

CAS NUMBER: None

NFPA 704M/HMIS RATING:            0/0 HEALTH            0/0 FLAMMABILITY            0/0 REACTIVITY  
0 = Least            1 = Slight            2 = Moderate            3 = High            4 = Extreme

CANADIAN PRODUCT CLASSIFICATION: wood product - exempted

### **SECTION II - HEALTH/SAFETY ALERT**

HANDLING MAY CAUSE SPLINTERS  
WOOD DUST MAY CAUSE EYE AND SKIN IRRITATION  
OBSERVE GOOD HYGIENE AND SAFETY PRACTICES WHEN HANDLING THIS PRODUCT  
DO NOT USE THIS PRODUCT UNTIL MSDS HAS BEEN READ AND UNDERSTOOD  
WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.  
DO NOT BURN IN OPEN FIRES, STOVES, FIREPLACE OR RESIDENTIAL BOILERS.  
THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC)  
HAS CLASSIFIED UNTREATED WOOD DUST AS A HUMAN CARCINOGEN.

## **SECTION III - HEALTH HAZARD INFORMATION**

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

SKIN: Prolonged and/or repeated direct contact with treated or untreated wood dust may cause mild, transient irritation. Various species of untreated wood dust can elicit allergic contact dermatitis in sensitized individuals. See Section XIII - Comments.

INHALATION: Finely divided treated or untreated wood dust may cause nose, throat or lung irritation and other respiratory effects. Breathing excessive amounts of wood dust (primarily hard wood) has been associated with nasal cancer in some industries. 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. See Section XIII - Comments.

INGESTION: Not anticipated to be a health problem. A single ingestion by a small child of a large amount (approximately 2.5 oz. 6 cubic inches) of treated wood dust may require immediate medical attention. See Section IV - NOTE TO PHYSICIAN and Section XIII - COMMENTS.

OTHER: See Section XIII - COMMENTS for additional information on health effects.

## **SECTION IV - EMERGENCY AND FIRST AID PROCEDURES**

EYE CONTACT: Gently flush any particles from the eye with large amounts of water for 15 minutes. DO NOT RUB EYES.

SKIN CONTACT: 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.

INHALATION: Remove from exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen as indicated. Seek medical aid.

INGESTION: Give 1 to 2 glasses of milk or water to victim if conscious and alert. Induce vomiting OR give 1 to 2 oz (30 to 60g) activated charcoal in water to victim if conscious and alert. See Section XIII - COMMENTS.

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

## **SECTION V - FIRE AND EXPLOSION HAZARD INFORMATION**

FLASH POINT & METHOD: NA

AUTOIGNITION TEMP: NA

FLAMMABLE LIMITS (% BY VOLUME/AIR): LOWER: NA UPPER: NA

TDG FLAMMABILITY CLASSIFICATION: none

EXTINGUISHING MEDIA: Use water stream/spray/fog. Use methods applicable to surrounding area.

FIRE-FIGHTING PROCEDURES: Fire from a separate fuel source may be intense enough to cause thermal decomposition releasing harmful gases including oxides of carbon and nitrogen. Wear complete fire service protective equipment, including full-face MSHA/NIOSH approved self-contained breathing apparatus.

FIRE AND EXPLOSION HAZARDS: Dust may form explosive mixture with air. Under fire conditions, may emit irritant/toxic gas and/or fumes.

SENSITIVITY TO MECHANICAL IMPACT: ND

SENSITIVITY TO STATIC DISCHARGE: ND

## SECTION VI - SPILL, LEAK AND DISPOSAL INFORMATION

SPILL OR LEAK PROCEDURES (PRODUCT): Not applicable

WASTE DISPOSAL: Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and federal regulations.

## SECTION VII - RECOMMENDED EXPOSURE LIMIT/HAZARDOUS INGREDIENTS

EXPOSURE LIMIT (PRODUCT):  
\*Confirmed Human Carcinogen  
\*\*15 min.

HAZARDOUS INGREDIENTS	CAS NUMBER	%BY WT.	EXPOSURE LIMIT (PPM;MG/M3)
Chromium (III) (as Cr)	7440-47-3	<2	ACGIH-TWA - 0.5
			OSHA-TWA - 0.5
			NIOSH-TWA - 0.5
Arsenic (V)	7440-38-2	<2	ACGIH-TWA - 0.01*
			NIOSH-TWA - 0.002**
			OSHA-TWA - 0.010
Copper (As Copper Metal)	7440-50-8	<2	ACGIH-TWA - 1
			OSHA-TWA - 1
			NIOSH-TWA - 1
Wood Dust (Soft Wood)	None		ACGIH-TWA - 5

Oil Emulsion (Oil Mist)	None	<7	ACGIH-STEL -	10
			ACGIH-TWA -	5
			ACGIH-STEL -	10
			NIOSH-TWA -	5
			NIOSH-STEL -	10
			OSHA-TWA -	5

----- SARA TITLE III SECTION 313 CHEMICALS -----  
(SEE SECTION VII FOR CAS NUMBERS AND PERCENTAGES)

Arsenic  
Chromium  
Copper

## SECTION VIII - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Industrial safety glasses, minimum. As necessary to comply with 29 CFR 1910.133 and work area conditions: use side shields, goggles or face shield. When power-sawing and machining, wear goggles.

SKIN PROTECTION: As needed to protect from mechanical hazards (i.e., wood splinters, sharp edges, handling rough surfaced material etc.). For dusty operations (areas) wear necessary resistant protective apparel to include head, hand and safety-type footwear items. HEARING PROTECTION: Wear ear plugs or ear muffs when power sawing and/or cutting wood. See Sect. XIII for additional information on skin protection.

RESPIRATORY PROTECTION: Not required under normal use conditions. When sawing or machining treated wood, wear a MSHA/NIOSH approved dustmask (TC-21C).

VENTILATION: Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below current exposure limits and areas below explosive dust concentrations.

## SECTION IX - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Avoid frequent or prolonged contact with the skin or inhalation of treated wood dusts. When sawing and machining treated wood, wear a dust mask. Observe good personal hygiene practices and recommended procedures. Change protective clothing/gloves when signs of contamination appear.

STORAGE: No special storage is required.

OTHER: Sawing/machining treated wood should be performed where adequate ventilation is present to avoid accumulations of airborne treated wood. If preservatives/sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing. See SECTION XIII (COMMENTS) for additional information.

## SECTION X - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Stable under normal conditions.

INCOMPATIBILITY: Strong acids, open flame and oxidizers.

HAZARDOUS REACTIONS/DECOMPOSITION/COMBUSTION PRODUCTS: Contact with strong acid may release metals. Combustion products may include smoke, oxides of carbon, nitrogen, chrome, copper and arsenic. The metals may remain in the wood ash as well as be released into the air.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: None

## **SECTION XI - PHYSICAL DATA**

BOILING POINT: NA	SPECIFIC GRAVITY: same as wood
MELTING POINT: NA	% VOLATILE BY VOL: NA
VAPOR PRESSURE: NA	EVAPORATION RATE(ETHER=1): NA
VAPOR DENSITY(AIR=1):NA	VISCOSITY: NA
SOLUBILITY: Insoluble (WATER)	pH: NA
VOC: NA	
COEFFICIENT OF WATER/OIL DISTRIBUTION: ND	
APPEARANCE/ODOR: Light green colored wood.	

## **SECTION XII - TRANSPORT INFORMATION**

## **SECTION XIII - COMMENTS**

Individuals with pre-existing disease in or a history of ailments involving the skin, kidney, liver, respiratory tract, eyes, or nervous system are at a greater than normal risk of developing adverse effects from woodworking operations with this product.

UNTREATED WOOD DUST OR SAWDUST: The principal health effects reported from occupational exposure to sawdust or wood dust generated from untreated wood are dermatitis, rhinitis, conjunctivitis, reduced or suppressed mucociliary clearance rates, chronic obstructive lung changes, and nasal sinus cancer. Skin and respiratory sensitization have been reported from exposure to hardwood dust. The International Agency for Research on Cancer (IARC) classifies untreated wood dust as a Group 1 human carcinogen. The 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.

CCA TREATED WOOD: Sawdust from CCA treated wood has been shown not to cause chromosome changes in mice fed sawdust or birth defects in mice or rabbits receiving sawdust in their feed or applied to their skin.

Recreational exposure to children using CCA treated wood playground equipment has been evaluated. The results of this study indicate that the amount of arsenic transferred from the wood surface to the child is within the normal variation of total arsenic exposure to children and that the maximum risks of skin cancer associated with the exposure approximates the skin cancer risk from the sunlight experienced during play periods.

Leaf, stem, and fruit of grape plants grown adjacent to CCA treated wood poles did not take up preservative components from the poles above background levels (limit of detection 0.2 and 0.05 ppm for chrome and arsenic, respectively).

CCA PRESERVATIVE: The effects of industrial exposure to the chrome-copper-arsenic preservative used to treat CCA wood has been evaluated in three independent epidemiology studies. In each case the authors concluded that workers exposed on a daily basis to these preservatives were at no increased risk of death or disease as a result of their exposure. Ingestion of components (arsenic and chromium) of the liquid preservative has caused toxicity to pregnant laboratory animals and their fetuses. Reproductive performance in laboratory animals was not affected by feeding diets containing arsenic. IARC, NTP and OSHA 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: 1) consumption of Fowler's Solution, a medicinal trivalent arsenical; 2) inhalation and skin contact with inorganic trivalent arsenical sheep-dust; 3) the combined inhalation of arsenic trioxide (trivalent arsenical), sulfur dioxide, and other particulates from ore smelting in arsenic trioxide production; 4) occupational exposure to nonwater-soluble hexavalent chromium. This product is not manufactured with trivalent arsenic or nonwater-soluble hexavalent chromium compounds but may contain some trivalent arsenic as a result of reactions occurring after wood treatment.

No known ingredients which occur at greater than 0.1%, other than those listed above, are listed as a carcinogen in the IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, the NTP Annual Report on Carcinogens or OSHA 29 CFR 1910.1001-1047 subpart Z Toxic and Hazardous Substances (Specifically Regulated Substances).

SKIN PROTECTION (protective material): Permeation/degradation values of chemical mixtures cannot be predicted from pure components or chemical classes.

Thus, these materials are normally best estimates based on available pure component data. A significant difference in chemical breakthrough time has been reported for generically similar gloves from different manufacturers (AIHA J., 48, 941-947 1987).

Do not use until manufacturer's precautions have been read/understood. Wash exposed areas promptly and thoroughly after skin contact from working with this product and before eating, drinking, using tobacco products or rest rooms.

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Prepared By: Safety and Health Department

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REVISION DATE: 08/96  
SPECIFICATION SHEET NUMBER:  
SUPPLIER INFORMATION: Same as manufacturer.

CODE NUMBER: WPR00141AU9605  
REPLACES SHEET: WPR00141JU9604

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NOTICE: While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Koppers Industries makes no warranty with respect thereto and disclaims all liability from reliance

thereon.