INTERNATIONAL PAPER

MATERIAL SAFETY DATA SHEET

International Paper, 6075 The Corners Parkway, Suite 212, Norcross, GA 30092 770/246-4150

CCA TREATED WOOD AND LUMBER

SECTION 1: PRODUCT IDENTIFICATION

Trade Name (As Labeled): CCA Treated Wood and Lumber

Synonyms, Common Names: Pressure Treated Softwood, Chromated-Copper-Arsenate Treated Wood and Lumber

Description: Boards, Poles, Posts, etc., pressure treated with a chromated copper arsenate solution.

Emergency Phone Number: Chemtrec (800) 424-9300 24 hours everyday

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	CAS #	% wt.
Arsenic Pentoxide	1303-28-2	< 5%
Copper Oxide	1317-38-0	< 5%
Chromium Oxide	1308-38-9	< 5%
Softwood	None	85-95%

EXPOSURE LIMITS (in mg/m^3):

Hazardous Component	OSHA PEL TWA	OSHA PEL STEL/ (C)	ACGIH TLV TWA	ACGIH TLV STEL	NIOSH REL
Arsenic (as As)	0.01	none	0.01	none	0.002 (C)
Copper (as Cu)	1	none	1	none	none
Chromium (III) Compounds (as Cr)	0.5	none	0.05	none	0.5
Softwood (Dust)					
-total	15	none	5	10	none
-respirable	5	none	none	none	none

NOTE: The 1989 OSHA PELs (5 mg/m^3 TWA and 10 mg/m^3 STEL for wood dust) were vacated in 1993 and are not currently enforceable by Federal OSHA. Some state OSHA programs may still enforce the 1989 limits.

SECTION 3: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: **Exposure to dust from machining is not expected to create an emergency situation. Wood dust can cause skin rashes, allergic reactions, eye and nose inflammation, respiratory irritation and certain rare cancers. It presents a severe explosion hazard if a dust cloud contacts an ignition source, or may spontaneously ignite in contact with strong oxidizers. Exposure to the copper, chromium and arsenic by breathing wood dust or contacting the solid product is not expected to create an emergency situation. If ingestion of wood dust or ashes from burning CCA treated lumber occurs, see Section 4. It is possible that breathing dust from the product could trigger an allergic reaction in sensitive individuals.**

SYMPTOMS OF OVEREXPOSURE, BY ROUTE OF EXPOSURE:

INHALATION: Wood dust may cause nasal dryness; irritation and obstruction of the respiratory system; an inhalant allergic response in sensitive individuals; and coughing, wheezing and sneezing. Nasal cancers are also associated with wood dust exposures, predominantly in furniture manufacturers (working with hardwoods such as beech, oak, mahogany, maple, walnut, teak, and birch). Workers in the building industry (e.g., carpenters) and lumber/sawmill industries (including logging) do not have as strong of a correlation between wood dust exposure and nasal cancer. Some woods, e.g., western red cedar, are pulmonary sensitizers and can cause asthma. Further, sawmill workers can develop hypersensitivity to wood dust due to spores, fungi, etc., growing on wood. Inorganic arsenic can cause pharyngitis, perforation of the nasal septum, hoarseness, and irritation of mucous membranes. Arsenic is considered to be a cause of cancer of the bronchi. It is regulated by OSHA as a carcinogen. Inhalation of copper salts can result in irritation of nasal mucous membranes, sometimes of the pharynx, and, in extreme exposures, ulceration and perforation of the nasal septum.

SKIN OR EYE CONTACT: Wood dust can cause eye irritation and conjunctivitis. Certain species of wood dust can elicit allergic contact dermatitis in sensitized individuals. Arsenic and copper salts can cause skin and eye irritation. Copper salts can also cause ulceration and turgidity of the cornea with heavy or prolonged exposure. Chromium compounds can cause allergic contact dermatitis in susceptible individuals.

INGESTION: Not expected to be a problem with this product. If large amounts of sawdust or ashes from burned CCA treated wood are eaten, see Note to Physician in Section 4.

HEALTH EFFECTS OR RISKS FROM EXPOSURE (A BASIC EXPLANATION):

ACUTE: Overexposure to wood dust can cause nasal irritation and overcome the clearance mechanism in the respiratory tract (mucocilliary pathway). Vision will also be impaired at high dust concentrations, indicating safety concerns.

CHRONIC: Chronic exposure to wood dust may cause nasal adenocarcinoma (cancer in the nose). See Section 11 for further cancer information.

SECTION 4: FIRST-AID MEASURES

If skin or eye contact: Do not allow the victim to rub or keep eyes tightly shut. Gently lift eyelids and flush with flooding amounts of water to remove particles. For dermal contact, rinse away loose material and wash exposed area with soap and water. In the case of a splinter, remove the splinter, wash the affected area, and place a bandage on the wound if necessary. If irritation persists, seek medical attention.

If swallowed: NOTE TO PHYSICIAN: If one ounce of wood dust per 10 pounds of body weight or one ounce of ashes is ingested, acute arsenic intoxication is a possibility. If arsenic intoxication is a possibility: give 1-2 glasses of milk or water to victim if conscious and alert. Induce vomiting OR give victim 1-2 oz. (30-60 g) of activated charcoal in water, if victim is conscious and alert.

If inhaled: Remove to fresh air. If persistent irritation or breathing difficulties persist, seek medical attention.

Take a copy of this MSDS to physician or health professional with victim.

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT:	N/A
AUTOIGNITION TEMPERATURE :	Variable
FLAMMABLE LIMITS IN AIR (%):	Lower: 0.035 oz/ft³ Upper: Variable
EXTINGUISHING MEDIA:	Water is best. Use fire extinguisher rated for "A" materials, ordinary combustibles.

FIRE-FIGHTING PROCEDURES: Wear complete fire service protective equipment, including full-face MSHA/NIOSH approved self-contained breathing apparatus. Use water to cool fire-exposed material, protect structure, and protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Wood dust is a strong and severe explosion hazard if a dust "cloud" contacts an ignition source. Hot, humid conditions may result in spontaneous combustion of accumulated wood dust. Partially burned or scorched wood dust can explode if dispersed in air.

NFPA RATINGS:

HEALTH:	2
FLAMMABILITY:	2
REACTIVITY:	0
OTHER:	-

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Spills are unlikely because wood dust is generally not kept in containers. Wood dust should be cleaned up frequently; once a day should be a minimum requirement. To avoid dispersing the dusts in air, scoop up into containers or vacuum (with appropriate filter). Damp mop any residue. Keep open ignition sources out of areas where wood dust is generated.

SECTION 7: HANDLING AND STORAGE

WORK and HYGIENE PRACTICES: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Wash thoroughly with soap and water.

STORAGE and HANDLING PRACTICES: No special handling requirements. Where wood dust is stored for disposal, keep in a cool area away from heat, ignition sources, and oxidizing materials.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Keep open ignition sources out of areas where wood dust is generated.

SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

VENTILATION and ENGINEERING CONTROLS: To avoid static sparks, electrically ground and bond all equipment used in and around processes that involve wood dust generation. Enclose processes where possible to prevent/minimize dust dispersion into work areas. Provide general or local exhaust ventilation systems to maintain airborne concentrations below the exposure limits.

RESPIRATORY PROTECTION: Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program including provisions for medical certification, training, fit-testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage must be implemented. If concentrations are below the TLV and/or PEL for wood dust, a NIOSH approved disposable dust/mist respirator may be used for personal comfort. For concentrations above the TLV and/or PEL, consult the NIOSH respirator decision logic found in Publication No. 87-116 or ANSI Z88.2-1992. Note ANSI Z88.2-1992 requires the use of a HEPA filter if the particle size distribution of the contaminant is unknown. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.*

EYE PROTECTION: Wear approved industrial safety glasses as a minimum. When power sawing or machining, use goggles. Ensure compliance with OSHA's personal protective equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION (Continued)

SKIN PROTECTION: Avoid frequent or prolonged contact with the skin. Wear gloves to protect from mechanical hazards such as splinters. Clean or dispose of gloves when contamination is evident. Ensure compliance with OSHA's PPE standards 29 CFR 1910.132 (general) and 138 (hand). In very dusty operations such as sawing, milling, machining, or sanding, wear disposable coveralls; discard when signs of contamination are evident. If material collects on work clothes, launder separately from other clothes. Avoid frequent or prolonged contact with the skin.

OTHER: Whenever possible, sawing, sanding, or otherwise milling treated wood should be performed outdoors to avoid accumulations of dust.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

VAPOR DENSITY:	N/A	EVAPORATION RATE:	N/A
SPECIFIC GRAVITY:	N/A	MELTING POINT or RANGE:	N/A
SOLUBILITY IN WATER:	Insoluble	BOILING POINT:	N/A
VAPOR PRESSURE (mm Hg):	N/A	pH:	N/A
APPEARANCE and COLOR:	Greenish to greenish brown wood		
ODOR:	Wood		

HOW TO DETECT THIS SUBSTANCE (warning properties): Visible levels of wood dust does not indicate that an overexposure will occur. When visibility is impaired due to high levels of wood dust, take precautions to minimize exposure and explosion potential. Have exposures evaluated by a professional.

SECTION 10: STABILITY and REACTIVITY

STABILITY: CCA Treated Wood and Lumber is stable. Wood dust is stable at room temperature under normal storage and handling conditions.

CONDITIONS TO AVOID: Exposure to heat, ignition sources, and incompatibles.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Drying oils and oxidizing agents, such as chlorine, nitric acid, perchloric acid, iodine, permanganates, and dichromates.

HAZARDOUS POLYMERIZATION: It does not polymerize.

PRODUCTS OF DECOMPOSITION: Thermal oxidative decomposition of wood dust can produce acrid smoke, carbon monoxide, aldehydes, and organic acids. Strong acids may release treatment chemicals.

SECTION 11: TOXICOLOGICAL INFORMATION

SUSPECTED CANCER AGENT

This product's ingredients are found on the following cancer lists:

	FEDERAL OSHA	NTP	IARC
Arsenic Pentoxide	yes	yes	yes
Chromium Oxide	no	no	no
Copper Oxide	no	no	no
Wood Dust	no	no	yes

The carcinogenicity of CCA treated wood has not been evaluated as a whole. NIOSH lists wood dusts as Class-X (carcinogen without further categorization). IARC classifies wood dust as a carcinogen to humans (Group 1). This 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 exposure to wood dust. IARC did not find sufficient evidence to associated wood dust exposure to cancers of the oropharynx, hypopharynx, lung, lymphatic, hematopoietic systems, stomach, colon, or rectum. Nasal cancers are more highly associated with hard woods in the furniture manufacturing and cabinet-making industries. The German DFG lists wood dust as MAK-A1 (capable of producing malignant tumors as shown by experience with humans) for certain hardwoods such as beech and oak, and MAK-B (justifiably suspected of have carcinogenic potential) for soft wood and western red cedar. The carcinogenic agent(s) in wood dust have not been identified. The NTP's 7th report (1994) stated that there is inadequate evidence for the carcinogenicity of most trivalent chromium compounds in experimental animals.

1994 TOXICITY DATA *(RTECS # CG2275000 - Arsenic Pentoxide)*

Human, leukocytes: 50nmol/L, DNA inhibition
Human, fibroblast: 100 umol/L, cytogenic analysis

Rat, oral: LD_{50} = 8 mg/kg
Mouse, oral: LD_{50} = 55 mg/kg

1994 TOXICITY DATA *(RTECS # GB6475000 - Chromium (III) Oxide):*

Mutation: 10 ug/plate, Salmonella typhimuriummutation. 10 mmol/L, Bacillus subtilis DNA repair. 100 mg/L hamster lung mutation. 34 mg/L hamster lung, sister chromatid exchange. 50 mg/L hamster lung, mammalian somatic cell mutation.

Tumor: 90 mg/kg Intraperitoneal dose in rat caused lung/thorax/respiratory tumors and kidney tumors, found as equivocal tumorigenic agent by RTECS criteria.
45 mg/kg intrapleural dose in rat caused lung/thorax/respiratory tumors and tumors at the site of application and was found to be an equivocal tumorigenic agent by RTECS criteria

See RTECS file for additional toxicity data information on mutation, reproductive, and toxic effects of arsenic pentoxide, chromic acid, and copper oxide (RTECS # GL7900000) exposure. There is no toxicological information in the Wood Dust RTECS file. Monitor RTECS file for Wood Dust *(RTECS # ZC9850000)* for future activity.

SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin, eyes, and respiratory tract disorders.

RECOMMENDATIONS TO PHYSICIANS: See Section 4 for accidental ingestion.

SECTION 12: ECOLOGICAL INFORMATION

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).

SECTION 13: DISPOSAL CONSIDERATIONS

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 14: TRANSPORTATION INFORMATION

This material is *not* hazardous as defined by 49 CFR 172.101 by the US Department of Transportation.

PROPER SHIPPING NAME:	CCA Treated Wood and Lumber
HAZARD CLASS NUMBER and DESCRIPTION:	None
UN IDENTIFICATION NUMBER:	None
DOT LABEL(S) REQUIRED:	None

SECTION 15: REGULATORY INFORMATION

SARA REPORTING REQUIREMENTS: Copper, Chromium, and Arsenic are Section 313 listed chemicals. Wood Dust is reportable under SARA Sec. 311, 312.

LABELING (Precautionary Statements):

SIGNAL WORD: CCA Treated Wood and Lumber

TARGET ORGANS: Eyes, skin, respiratory tract

HAZARD: Sawing, sanding or machining wood products can produce wood dust which can cause a flammable or explosive hazard. Wood dust may cause lung, upper respiratory tract, eye and skin irritation. Some wood species may cause dermatitis and/or allergic respiratory effects. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans. Arsenic in this product is suspected of causing cancers of the respiratory system.
Avoid dust contact with ignition source.
Sweep or vacuum dust for recovery or disposal.
Avoid prolonged or repeated breathing of wood dust in air.
Avoid dust contact with eyes and skin.
For additional information, see the Material Safety Data Sheet.

SECTION 16: OTHER INFORMATION

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