

SAFETY DATA SHEET

1. Identification

Product identifier Chromated Copper Arsenate (CCA) Treated Wood
Other means of identification 092
Recommended use Preservative Treated Wood for various weather protected and exterior uses.
Recommended restrictions Outdoor residential structures such as decks and playgrounds.

Manufacturer/Importer/Supplier/Distributor information

Customers of Koppers Performance Chemicals Inc.

Company name

Address

Telephone number

Contact person

Emergency phone number

E-mail

2. Hazard(s) identification

Chromated Copper Arsenate (CCA) Treated Wood, under 29 CFR 1910.1200 Hazard Communication Standard, are considered mixtures due to further processing which may produce dusts and or fume. The categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3" United Nations, New York and Geneva, 2009 have been evaluated. Refer to Section 3, 7, 8 and 11 for additional information.

Physical hazards Not classified.
Health hazards Carcinogenicity Category 1A
OSHA defined hazards Combustible dust

Label elements

Hazard symbols



Signal word Danger
Hazard statement May cause cancer by inhalation. May form combustible dust concentrations in air.

Precautionary statement

Prevention

This solid, treated wood product poses little or no immediate health or fire hazard. When treated or untreated wood products are subjected to sawing, drilling, sanding, burning, grinding or other similar processes, potentially hazardous airborne particulate and fumes may be generated.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices.

Response

If exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use water fog, foam, carbon dioxide, dry chemical for extinction. Collect spillage.

Storage

Store away from incompatible materials. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Wood/Wood dust	N/A	<92

Trivalent Chromium	1308-38-9	<3.5
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5

Composition comments Depending on the additives applied to the treating solution, this wood may also contain < 1% of mold inhibitors, <1% of a wax oil emulsion, and <1% of a colorant. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals.

Skin contact Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact Do not rub eye. Immediately flush eye(s) with plenty of water. Remove any contact lenses and open eyelids wide apart. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Indication of immediate medical attention and special treatment needed Treat symptomatically. Respiratory ailments and pre-existing skin conditions may be aggravated by exposure to wood dust. If one ounce of treated wood dust per 10 lbs. of body weight are ingested, acute arsenic intoxication is a possibility.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance. Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions Use water spray to cool fire exposed surfaces and to protect personnel. In case of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Avoid generation and spreading of dust. Avoid spread of dust. Avoid inhalation of dust. Provide adequate ventilation. Wear appropriate personal protective equipment (See Section 8).

Methods and materials for containment and cleaning up Sweep or vacuum up spillage and collect in suitable container for disposal. If not possible, gently moisten dust before it is collected with shovel, broom or the like. Containers must be labeled. For waste disposal, see Section 13.

Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Not applicable for Chromated Copper Arsenate (CCA) Treated Wood as sold/shipped, however, when treated or untreated wood products are subjected to sawing, drilling, sanding, burning, grinding or other similar processes, potentially hazardous levels of airborne particulate and fumes may be generated and should be evaluated and controlled as necessary.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid working with freshly treated wet wood. If not possible, wear long sleeve shirt, long pants and gloves when working with freshly treated wet wood. Clothing should be removed and replaced if it becomes wet due to contact with freshly treated wood. Avoid prolonged or repeated breathing of dust. Avoid contact with skin and eyes. Do not smoke. Do not burn preserved wood. Do not use preserved wood as mulch. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a dry, cool and well-ventilated place. Store away from incompatible materials (See Section 10).

8. Exposure controls/personal protection

Occupational Exposure Limits (OELs): Chromated Copper Arsenate (CCA) Treated Wood as sold/shipped in its solid, treated wood product form does not present an inhalation, ingestion or contact hazard, nor would any of the following exposure data apply. However, operations such as sawing, drilling, sanding, burning, grinding or other similar processes may produce fumes and/or particulates. The following exposure limits are offered as reference, for an experienced industrial hygienist to review.

US. OSHA

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	PEL	5 mg/m ³ 15 mg/m ³	Respirable dust. Total fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Trivalent Chromium (CAS 1308-38-9)	PEL	0.5 mg/m ³

ACGIH

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	TWA	1 mg/m ³	Inhalable fraction.

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Arsenic Pentoxide (CAS 1303-28-2)	Ceiling	0.001 mg/m ³	Dust and mist.
Copper Oxide (CAS 1317-39-1)	TWA	1 mg/m ³	
Arsenic Pentoxide (CAS 1303-28-2)	TWA	0.05 mg/m ³	Dust
Wood/Wood dust (CAS N/A)	TWA	1 mg/m ³	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Arsenic Pentoxide (CAS 1303-28-2)	35 µg/l	Inorganic arsenic, plus methylated, metabolites as As	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Provide sufficient general/local exhaust ventilation to maintain inhalation exposures below current exposure limits and areas below explosive dust concentrations. Shower, hand and eye washing facilities near the workplace are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields or safety goggles when sawing or cutting.

Skin protection

Hand protection

When handling wood, wear leather or fabric gloves.

Other

Wear normal work clothes and safety shoes. Use of an impervious apron is recommended.

Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH–approved respirator if there is a potential for exposure to dust exceeding exposure limits (See 29 CFR 1910.134, respiratory protection standard).
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	If wood dust contacts the skin, workers should wash the affected areas with soap and water. Clothing contaminated with wood dust should be removed, and provisions should be made for the safe removal of the chemical from the clothing. Persons laundering the clothes should be informed of the hazardous properties of wood dust. A worker who handles wood dust should thoroughly wash hands, forearms, and face with soap and water before eating, using tobacco products, using toilet facilities, applying cosmetics, or taking medication. Workers should not eat, drink, use tobacco products, apply cosmetics, or take medication in areas where wood dust is handled, or processed. Observe any medical surveillance requirements.

9. Physical and Chemical Properties

Appearance

Physical state	Solid.
Form	Chips. Dust.
Color	Yellow/green.
Odor	Wood odor.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash Point	Not available.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Combustible dust.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Highly insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous reactions do not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Minimize dust generation and accumulation. Avoid contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Wood dust, treated or untreated, is irritating to the nose, throat and lungs. Prolonged or repeated inhalation of wood dusts may cause respiratory irritation, recurrent bronchitis and prolonged colds. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals. Prolonged exposure to wood dusts by inhalation has been reported to be associated with nasal and paranasal cancer.
Skin contact	Handling may cause splinters. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals.
Eye contact	Dust may irritate the eyes.
Ingestion	Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting. Certain species of wood and their dusts may contain natural toxins, which can have adverse effects in humans.

Symptoms related to the physical, chemical and toxicological characteristics

Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust may irritate the eyes.
Respiratory or skin sensitization	
ACGIH Sensitization	
Wood/Wood dust (CAS N/A)	Dermal sensitization. Respiratory sensitization.
Respiratory sensitization	Exposure to wood dusts can result in hypersensitivity.
Skin sensitization	Exposure to wood dust can result in the development of contact dermatitis. The primary irritant dermatitis resulting from skin contact with wood dusts consist of erythema, blistering, and sometimes erosion and secondary infections occur.
Germ cell mutagenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a mutagen by OSHA.
Carcinogenicity	May cause cancer by inhalation. Untreated wood dust or saw dust: The International Agency for Research on Cancer (IARC) classifies untreated wood dust as a Group I 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 of untreated wood dust. Epidemiological studies have been reported on carcinogenic risks of employment in the furniture-making industry, the carpentry industry, and the lumber and sawmill industry. IARC has reviewed these studies and reports that there is sufficient evidence that nasal carcinomas have been caused by employment in the furniture-making industry where the excess risk is associated with exposure to untreated wood dust or sawdust from hardwood species. IARC concluded that epidemiological data are not sufficient to make a definite assessment of the carcinogenic risk of employment as a carpenter or worker in a lumber mill or sawmill.

IARC Monographs. Overall Evaluation of Carcinogenicity

Wood/Wood dust (CAS N/A)	1 Carcinogenic to humans.
Arsenic Pentoxide (CAS 1303-28-2)	1 Carcinogenic to humans.
Trivalent Chromium (CAS 1308-38-9)	3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Wood/Wood dust (CAS N/A)	Known To Be Human Carcinogen.
Arsenic Pentoxide (CAS 1303-28-2)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2)	Cancer
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Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
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Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	Chronic exposure to wood dusts can result in pneumonitis, and coughing, wheezing, fever and the other signs and symptoms associated with chronic bronchitis.
Further information	<p>All wood, whether treated with CCA or not, requires the use of PPE to avoid exposure to wood dust from sawing and sanding although not commonly done on the EPA pesticide label-directed applications of CCA.</p> <p>Upon treatment with wood, the metals in CCA transform to form an insoluble complex that remains tightly bound to wood fibers under most conditions of use. The effects of occupational exposure to the chrome-copper-arsenic preservative used to treat CCA wood has been evaluated in multiple independent epidemiology and worker exposure 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.</p> <p>Several exposure studies found air concentrations of arsenic and chromium below the limit of detection for outdoor carpentry work (drilling, sanding, sawing) using CCA treated lumber, poles and marine piles.</p> <p>Recreational exposure to children using CCA treated wood playground equipment has been evaluated by various government agencies and other groups. The results of one study indicated 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 wood exposure approximates the skin cancer risk from the sunlight experienced during play periods.</p> <p>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).</p>

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available on bioaccumulation.
Mobility in soil	The product is insoluble in water.
Mobility in general	The product is not volatile but may be spread by dust-raising handling.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. DO NOT BURN! Ash may be toxic and a hazardous waste; combustion vapors may be toxic. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
US RCRA Hazardous Waste P List: Reference	
Arsenic Pentoxide (CAS 1303-28-2)	P011
Waste from residues / unused products	Dispose in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2) Cancer. Liver. Skin. Respiratory irritation. Nervous system. Acute toxicity.

CERCLA Hazardous Substance List (40 CFR 302.4)

Arsenic Pentoxide (CAS 1303-28-2) LISTED

Copper Oxide (CAS 1317-39-1) LISTED

Trivalent Chromium (CAS 1308-38-9) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories

Hazard categories Carcinogenicity
Combustible dust

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Arsenic Pentoxide	1303-28-2	1		100	10,000

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Arsenic Pentoxide	1303-28-2	< 3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Arsenic Pentoxide (CAS 1303-28-2)

Trivalent Chromium (CAS 1308-38-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Arsenic Pentoxide (CAS 1303-28-2)

Trivalent Chromium (CAS 1308-38-9)

US. New Jersey Worker and Community Right-to-Know Act

Arsenic Pentoxide (CAS 1303-28-2)

Copper Oxide (CAS 1317-39-1)

Trivalent Chromium (CAS 1308-38-9)

Wood/Wood dust (CAS N/A)

US. Pennsylvania Worker and Community Right-to-Know Law

Arsenic Pentoxide (CAS 1303-28-2)


Trivalent Chromium (CAS 1308-38-9)

Wood/Wood dust (CAS N/A)

US. Rhode Island RTK

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)

US. California Proposition 65

 **WARNING.** Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information, go to www.P65Warnings.ca.gov/wood.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	04-05-2015
Revision date	10-30-2019
Version #	06
Further Information	HMIS® is a registered trade and service mark of the NPCA. E - Safety Glasses, Gloves, Dust Respirator

PERCENTAGE OF ACTIVE INGREDIENTS PER RETENTION LEVEL

	0.25 pcf	0.40 pcf	0.60 pcf	1.0 pcf	2.5 pcf
Arsenic Pentoxide	0.3%	0.4%	0.6%	1.0%	2.6%
Copper Oxide	0.15%	0.2%	0.3%	0.6%	1.3%
Chromium Trioxide	0.4%	0.6%	0.9%	1.4%	3.3%
Wood/Wood dust*	84.28%	83.98%	83.45%	82.45%	78.88%

* This represents the maximum amount of wood dust that could be generated if the wood was completely machined.

The above percentages are based on the applicable retention, a wood density of 32 pcf., and a moisture content of 15%, the above values may vary due to the variability of treatment and the natural variability of wood.

HMIS® ratings

Health: 1*
Flammability: 1
Physical hazard: 0
Personal protection: E

NFPA ratings



Disclaimer

Supplier cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.