SPF Treated CCA

SECTION 1. IDENTIFICATION

Product Identifier	SPF Treated CCA
Other Means of Identification	CCA Type C Pressure Treated Wood
Other Identification	Spruce Pine Fir (SPF) pressure treated wood with chromated copper arsenate
Product Family	Treated Lumber
Recommended Use	SPF product is used for general lumber purpose. Note the majority of the hazards are determined based on wood dust (softwood) treated with chromated copper arsenate (CCA) generated as a result of cutting, sanding or disturbing the product.
Manufacturer / Supplier	Viance Engineering, 200 E Woodlawn Rd #350 , Charlotte, North Carolina, 28217, 704-522-0825
Emergency Phone No.	West Fraser (Name not available), 1-604-895-2700 (fax: 1-604-681-6061) Chemtrec, 1-800-424-9300
SDS No.	007
Date of Preparation	September 30, 2015

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Acute toxicity (Inhalation) - Category 4; Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 2A; Respiratory sensitization - Category 1; Skin sensitization - Category 1; Germ cell mutagenicity - Category 2; Carcinogenicity - Category 1; Reproductive Toxicity - Category 2; Specific target organ toxicity (single exposure) - Category 1; Specific target organ toxicity (repeated exposure) - Category 1; Aquatic hazard (Acute) - Category 1; Aquatic hazard (Chronic) - Category 2
OSHA Defined Hazards: Combustible dust

GHS Label Elements

Signal Word:
Danger
Hazard Statement(s):

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H361	Suspected of damaging the unborn child.
H370	Causes damage to organs (lungs, respiratory system, skin, liver, kidneys).
H372	Causes damage to organs (lungs, respiratory system, skin) through prolonged or repeated exposure.

H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
Precautionary Statement(s):
Prevention:
P264 Wash hands and skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust.
P271 Use only outdoors or in a well-ventilated area.
P284 In case of inadequate ventilation wear respiratory protection (NIOSH approved air-purifying respirator with N100, R100, or P100 filter).
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P330 Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P321 Specific treatment (see supplemental first aid instruction on this label).
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE/doctor.
P307 + P311 If exposed: Call a POISON CENTRE/doctor.
P391 Collect spillage.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

Other Hazards

May form combustible dust concentrations in the air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
softwood, allergenic and non-allergenic species	Not available	60-100	Wood dust (ligno-cellulosic materials)
Chromium trioxide	1333-82-0	1-5	Chromium (VI) trioxide
Arsenic acid	7778-39-4	1-5	
Cupric oxide	1317-38-0	1-5	Copper oxide

Notes

Concentration of ingredients is presented according to WHMIS. Composition of softwood is estimated to be 91-99.5%. Chromium trioxide, arsenic acid, and copper oxide are estimated to be 1-4% (each ingredient).

CCA Type C pressure treated wood products are made up of > 90% wood and <10% CCA Type C 50%-60%. EPA registered wood preservatives; EPA registration No.: 10465-26 (CCA 50%), 10465-28 (CCA 60%). EPA est. No.: 10465-NC-2, 10356-GA-1, 10365-TX-1.

The hazards presented for SPF Treated CCA products predominantly relate to wood dust from softwood, allergenic and

non-allergenic species. No CAS Number is available.
Concentrations are expressed in % weight/weight.
N.Av. = Not Available

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), get medical attention. Take precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment).

Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for at least 20 minutes. If skin irritation or a rash occurs, get medical advice/attention. Clean contaminated clothing, shoes and leather goods.

Eye Contact

Rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

Ingestion

Rinse mouth with water. Get medical advice/attention if you feel unwell or are concerned.

First-aid Comments

Provide general supportive measures (comfort, warmth, rest). If exposed or concerned, get medical advice/attention.

Most Important Symptoms and Effects, Acute and Delayed

Information pertains to wood dust. May cause cancer. Can irritate the nose and throat. Can cause lung injury. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Contains an ingredient that is a respiratory and skin sensitizer. May cause asthma or an asthma-like reaction in some people. Repeated or prolonged exposure can irritate the skin. May cause dermatitis and an allergic skin reaction in some people.

Immediate Medical Attention and Special Treatment

Target Organs

Lungs, respiratory system, skin, eyes, liver, kidneys.

Special Instructions

Not available based on the literature reviewed.

Medical Conditions Aggravated by Exposure

No information on the pure product is available based on the literature reviewed. Information based on the ingredients indicate pre-existing skin and respiratory conditions.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Wood dust is combustible. Use extinguishing agent suitable for wood and for surrounding fire: flammable / combustible information is not available for the pure product.
Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Combustible dust. May form combustible dust concentration in air.
Hazardous and thermal combustion products include: carbon monoxide, carbon dioxide, soot, and toxic and irritating fumes and gases, such as hydrogen cyanide, aldehydes, organic acids and polynuclear aromatic compounds. Never

burn treated wood. Arsenic and chromium may be released into the environment as part of the smoke or remain in the ashes. See Section 10 Stability and Reactivity for more information.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases and smoke.
Dust explosion hazard. Use water spray or fog to prevent dust formation and minimize risk of explosion.
If entry into area is required wear positive pressure SCBA and full Bunker Gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

For release of large quantities of dust: evacuate the immediate area. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Before entry, especially into confined areas, spray water or use a water mister to reduce dust to a minimum. Remove or isolate incompatible materials, ignition sources as well as other hazardous materials.

Environmental Precautions

Although none specifically required for wood dusts, ingredients exist in the product which may be harmful to aquatic or terrestrial life. It is good practice to prevent releases into the environment. If a large quantity of dust is inside a building, prevent it from entering drains, ventilation systems and confined areas. Do not allow into sewers, on the ground or into waterways. Never burn treated wood. Arsenic and chromium may be released into the environment as part of the smoke or remain in the ashes.

Methods and Materials for Containment and Cleaning Up

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up. Avoid dust generation as wood dust is combustible. Apply water to dust before cleaning up. Avoid dry sweeping or using pneumatic powered air hoses to blow away dust. A high efficiency particulate air (HEPA) vacuum (explosion proof) may be used. Place dust into suitable, covered, labeled containers for disposal.

Other Information

Report large dust releases into the environment to local health, safety and environmental authorities, as required. Dispose dust in accordance with municipal, province/state, and federal requirements.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear gloves (leather or nitrile) to prevent skin contact irritation. Avoid generating dusts.
Avoid breathing in dust and prevent skin contact (repeated or prolonged skin contact). Do not get dust in eyes. Wear personal protective equipment to avoid direct contact with the dust.
General hygiene considerations: do NOT smoke in work areas. Do NOT eat, drink or store food in work areas. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.

Conditions for Safe Storage

Store in an area that is cool and dry and separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Follow all precautions given on this safety data sheet.
Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH® TLV®		OSHA PEL		NIOSH REL	
Chemical Name	**TWA**	**STEL [C]**	**TWA**	**STEL**	**TWA**	**STEL**
softwood, allergenic and non-allergenic species	1.0 mg/m3 (I) A4		15 mg/m3		1.0 mg/m3	
Chromium trioxide	0.05 mg/m3 A1 BEI				0.0002 mg/m3	

Arsenic acid	0.01 mg/m3 A1 BEI		0.01 mg/m3			0.002 mg/m3
Cupric oxide	0.2 mg/m3		0.1 mg/m3		0.1 mg/m3	

The OSHA PEL of 15 mg/m³ is for total dust (particulates not otherwise classified (PNOC)) and has a TWA exposure limit of 5 mg/m³ for the respirable fraction.
Allergenic and non-allergenic softwood species have an IARC 1 notation (Carcinogenic to Humans).
All softwood dusts have an ACGIH A4 notation (Not Classifiable as a Human Carcinogen).
The product may be hazardous if disturbed to create dust (e.g. sanding, cutting). Exposure controls are recommended based on wood dust of softwood, allergenic and non-allergenic species treated with CCA.
The chromium trioxide ACGIH TLV is for water soluble chromium VI compounds. The ACGIH TLV for chromium metal and Cr III compounds is 0.5 mg/m³.
The arsenic acid ACGIH TLV, OSHA PEL TWA, and NIOSH REL is noted above for arsenic and inorganic compounds as As. The NIOSH REL STEL is a ceiling limit.
Consult local authorities for provincial or state exposure limits. ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. C = Ceiling limit. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. I = Inhalable fraction. A4 = Not classifiable as a human carcinogen. NIOSH = National Institute for Occupational Safety and Health. REL = Recommended Exposure Limit. A1 = Confirmed human carcinogen. BEI® = Biological Exposure Index.

Appropriate Engineering Controls

For large scale use of this product (industrial manufacturing):
Engineering methods to control hazardous conditions (dust) are preferred. Methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions, and process modification (e.g., substitution with a less hazardous material).
Do not allow dust from the product to accumulate in the air in work or storage areas, or in confined spaces.
Exhaust dust directly to the outside through explosion proof ducting / ventilation systems, taking any necessary precautions for environmental protection.

If engineering controls, administrative controls and work practices are not effective in controlling exposure to dust from this product, then wear suitable personal protective equipment including approved respiratory protection.

Individual Protection Measures

Eye/Face Protection

Wear safety glasses with side shields or goggles if dusty conditions exist or are likely to be generated.

Skin Protection

Based on CCA-containing wood dust: wear protective clothing and gloves.
Wear gloves (e.g., leather or nitrile) to prevent skin contact irritation. Wear safety glasses or goggles. Wear personal protective clothing (cotton coveralls or disposable Tyvek coveralls) to protect against skin contact depending on the work task and risk assessment. Launder clothes before re-use. Wash separately from other clothes.

Respiratory Protection

Respirators are not normally required if the product is used with minimal disturbance and minimal dust is generated. The following respirator requirements are recommended for dusty conditions.
If the product is disturbed (e.g., cutting, sanding): wear a minimum half facepiece respirator with P100 cartridges for protection against chromate copper arsenate-containing wood dusts and their applicable exposure standards. Wear a half facepiece respirator for protection up to 10 times the exposure standard and a tight fitting full facepiece respirator for protection up to 50 times the exposure standard. Wear a full facepiece respirator if eye irritation occurs.
Recommendations apply only to NIOSH approved respirators. Consult an Industrial Hygienist for respirator decisions depending on work environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance Light green.

Odour Not available

Odour Threshold	Not available
pH	Not applicable
Melting Point/Freezing Point	Not applicable (melting); Not applicable (freezing)
Initial Boiling Point/Range	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not available
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	< 1
Solubility	Insoluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not applicable
Auto-ignition Temperature	204 - 260 ºC (399 - 500 ºF)
Decomposition Temperature	Not available
Viscosity	Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State	Solid
Molecular Formula	Not available
Molecular Weight	Not available
Critical Temperature	Not available
Other Physical Property 1	Lower Explosive Limit: 40 g/m³ (wood dust); Upper Explosive Limit: Variable (wood dust)
Other Physical Property 2	The autoignition temperature, LEL and UEL for wood dust vary with exact composition, particle size, moisture level, rate of heating and dust concentration.

SECTION 10. STABILITY AND REACTIVITY

Reactivity

See Incompatible Materials for a list of chemical reactions that could occur with other materials.

Chemical Stability

Normally stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Possibility of Hazardous Reactions

No information is available for the pure product based on the literature reviewed. Ingredients with information available is presented:
Softwood, allergenic and non-allergenic species: None expected under normal conditions of storage and use.
Chromium trioxide: None expected under normal conditions of storage and use.
Copper oxide: None expected under normal conditions of storage and use.
Arsenic acid: Refer to incompatible materials.

Conditions to Avoid

Keep away from heat, sparks, open flames, static discharge, and other ignition sources. Avoid generation of dust through cutting, sanding or disturbing the pure product. May form explosive dust-air mixtures. May auto-ignite at temperatures above 204.0 ºC (399.2 ºF).

Incompatible Materials

This product may react with strong acids and bases, reducing agents, halogens, metals and water-reactive materials. Ingredients with information available is presented:
Softwood, allergenic and non-allergenic species: Incompatible with oxidizing materials.
Copper oxide: reacts with hydrazine, hydrogen, sodium hypobromite, and manganese dioxide (359ºC).
Arsenic acid: bromide azide, and may ignite combustibles. Fumes of arsine gas may be formed if arsenic acid comes into contact with metals such as arsenic, iron, aluminum, and zinc.

Chromium trioxide: oxidizable, combustible materials, acetylene, chromium sulphide, diethyl ether, selenium, alcohols, ethers, glycerol, bromides, chlorides, sulphites and sulphides.
CCA: bleaches, deck cleaners or brighteners that contain sodium hypochlorite, sodium hydroxide, sodium percarbonate, oxalic acid, or citric acid may release toxic chemicals from CCA-treated wood.
Corrosivity to metals: This product may react with metals. Ingredients with information available is presented:
Copper oxide: powdered aluminum, anilinium perchlorate, magnesium, pthalic anhydride, boron, titanium, cesium acetylene carbide, magnesium and potassium.
Arsenic acid: arsenic, iron, aluminum and zinc may evolve flammable hydrogen gas.
Chromium trioxide: most metal powders, ammonia and ammonium salts, phosphorus and many finely divided organic compounds.

Hazardous Decomposition Products

Hazardous decomposition products include irritating and toxic vapours and gases of arsenic compounds, chromium oxides and copper compounds. Ingredients with information available is presented:
Softwood, allergenic and non-allergenic species: Under normal conditions of storage and use, hazardous decomposition products should not be produced. If a fire occurs, hazardous combustion products will be emitted: carbon monoxide, carbon dioxide, soot, and toxic and irritating fumes and gases, such as hydrogen cyanide, aldehydes, organic acids and polynuclear aromatic compounds.
Copper oxide: decomposes to cuprous oxide and oxygen at 1026-1030ºC.
Arsenic acid: toxic fumes of arsenic and arsine gas.
Chromium trioxide: Decomposes at 250ºC to chromium (III) oxide and oxygen. Will decompose to chromium fumes at temperatures in a fire.

SECTION 11. TOXICOLOGICAL INFORMATION

The predominant toxicity of treated wood products pertains to the dust created or generated by the processing or disturbance (cutting, sanding) of the raw product.

Likely Routes of Exposure

Inhalation; skin contact; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Chromium trioxide	167 mg/m3 (female rat) (4-hour exposure)	48 mg/kg (female rat)	57 mg/kg (rabbit)
Arsenic acid		48 mg/kg (rat)	
Cupric oxide		470 mg/kg (rat)	

The LC50 167 mg/m³ (female rat, 4-hour exposure) is cited as 87 mg/m³ (chromium VI, 4-hour exposure).

The chromium trioxide LD50 48 mg/kg (female rat) is cited as 25 mg/kg (chromium VI).

Softwood, allergenic and non-allergenic LD50 dermal: > 5000 mg/kg

Skin Corrosion/Irritation

Softwood, allergenic and non-allergenic species: handling and/or processing this material may generate a dust which can cause irritation of the skin. Potential symptoms include dermatitis.
Copper oxide: may cause irritation, or itchiness.
Arsenic acid: irritation.
Chromium trioxide: highly corrosive to skin based on human and animal information and pH (a 1% solution has a pH of <1).
Based on information available, product or dust from the product is an irritant, but is not expected to be corrosive. Itching and burning rashes have been reported by workers handling CCA treated wood products.

Serious Eye Damage/Irritation

Softwood, allergenic and non-allergenic species: handling and/or processing this material may generate a dust which can cause irritation of the eyes.
Copper oxide: irritation.
Arsenic acid: irritation and/or conjunctivitis.
Chromium trioxide: highly corrosive to eyes based on human and animal information and pH (a 1% solution has a pH of

<1).
Based on information available, product or dust from the product is an irritant, but is not expected to be corrosive.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Softwood, allergenic and non-allergenic species: handling and/or processing this material may generate a dust which can cause respiratory tract irritation, asthma, coughing / wheezing, allergic reactions and sinusitis.
Copper oxide: respiratory irritation of the nose and throat.
Arsenic acid: irritation of the upper respiratory tract occurs with dusts. Toxic if inhaled and may cause severe injury or death.
Chromium trioxide: respiratory tract irritant, nasal irritation and ulcers of nasal septum.
Handling of CCA treated wood is reported to cause neurological symptoms, difficulty breathing (headaches, nausea, shakiness, and thirst), nose bleeds, tight chest, hair falling out when bruised, tarry stools, memory issues, GI bleeding. At high concentrations, severe respiratory distress, effects on heart function (tachycardia and hypotension), burns to GI tract and bloddy diarrhea have occurred.

Skin Absorption

Arsenic acid: possible route of absorption.
Chromium trioxide: can cause serious skin injury.

Ingestion

Copper oxide: liver failure due to chronic ingestion of copper, and gastrointestinal effects from single and repeated ingestion of high concentrated copper-containing drinking water.
Arsenic acid: Acute renal failure, hemolytic anemia, and hepatitis may occur several days after ingestion.
Chromium trioxide: severe burns of the GI tract.

Aspiration Hazard

Not applicable.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Softwood, allergenic and non-allergenic species: repeated inhalation of dust may cause lung damage. Chronic exposure to wood dusts may cause nasal cancer and can result in dermatitis reactions, asthma, pneumonitis, coughing, changes in nasal mucosa, wheezing, fever and other signs and symptoms associated with chronic bronchitis.
Copper oxide: liver failure has been reported following chronic ingestion of copper. Contact may result in dermatitis, eczema or allergic responses or greenish discolouration of skin and hair.
Arsenic acid: chronic exposure increases risk of skin, lung, bladder, kidney, and possibly liver cancers. Exposure can also lead to perforation of the nasal septum and nerve damage effecting extremities (periferal nervous system), skin thickening/pigmentation changes, eczema, and allergenic dermatitis.
Chromium trioxide: limited evidence of carcinogenicity from CrO3 based on experimental animals; however, chromium (VI) ions are responsible for carcinogenic action. Can cause severe allergic lung reaction and may damage liver and kidneys. Chronic exposures have led to severe liver damage, central nervous system (CNS) involvement and possible lung cancer. May cause asthma (based on bronchial challenge tests).
Handling of CCA treated wood is reported to cause dermatitis, rashes, possible peripheral nerve damage (not confirmed) and other neurological symptoms.

Respiratory and/or Skin Sensitization

Chromium trioxide: reported to be a respiratory sensitizer. Skin sensitization is common and can cause outbreaks of dermatitis, rash, swelling, redness.
CCA treated wood: Evidence in animals suggests CCA may have skin sensitization ability; however, relevance to humans is unknown at this time.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
softwood, allergenic and non-allergenic species	Group 1	A4	Not Listed	Not Listed
Chromium trioxide	Group 1	A1	Known carcinogen	Listed
Arsenic acid	Group 1	A1	Known carcinogen	Listed
Cupric oxide	Not Listed	Not designated	Not Listed	Not Listed

No information is available for the pure product based on the literature reviewed. Ingredients with information available

is presented:
Allergenic and non-allergenic softwood species: IARC 1 notation (Carcinogenic to Humans). Wood dusts are a potential nasal cancer. All softwood dusts have an ACGIH A4 notation (Not Classifiable as a Human Carcinogen).
Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 1 = Carcinogenic to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A1 = Confirmed human carcinogen. A4 = Not classifiable as a human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration.

Reproductive Toxicity

Development of Offspring

Arsenic acid: may result in spontaneous abortion or stillbirth with either acute or chronic poisoning. May be a teratogen in humans since it has been shown to be a teratogen in animals.
Chromium trioxide: May be a teratogen in humans since it has been shown to be a teratogen in animals.

Sexual Function and Fertility

No information is available for the pure product or the ingredients based on the literature reviewed.

Effects on or via Lactation

No information is available for the pure product or the ingredients based on the literature reviewed.

Germ Cell Mutagenicity

No information is available for the pure product based on the literature reviewed. Ingredients with information available is presented:
Copper oxide: data is not conclusive.
Arsenic acid: may cause mutations. May induce DNA damage in human cells, and may elevate chromozone aberrations in white blood cells.
Chromium trioxide: may cause heritable genetic damage.

Interactive Effects

No information is available for the pure product or the ingredients based on the literature reviewed.

SECTION 12. ECOLOGICAL INFORMATION

Inclusion of Ecological Information on a Safety Data Sheet (SDS) is optional under the US Hazard Communication Standard (2012), and the Canadian WHMIS regulations. In other jurisdictions, inclusion of Ecological Information may be a requirement. For specific requirements, contact the relevant regulatory authorities in the jurisdiction where the SDS is intended to be used.

Toxicity

CCA treated wood: LC50 (96-hour, rainbow trout) = 0.32 mg/L
The wood preservatives in this product can be extremely harmful to both terrestrial and aquatic plant or animal life.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Chromium trioxide	21-152 mg/L (96-hour)			
Arsenic acid	22-35 mg/L (96-hour; static)			
Cupric oxide	25 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)			

Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Chromium trioxide	32 mg/L			
Arsenic acid			0.02 mg/L (Daphnia magna (water flea);	

			21-day; salt water)	
Cupric oxide	0.4 mg/L (Oncorhynchus mykiss (rainbow trout); 28-day)		0.4-20 mg/L (Mysidopsis bahia (opossum shrimp); static)	

Persistence and Degradability

Field and laboratory studies have demonstrated that under certain circumstances copper, arsenic, and/or chromium can leach from treated wood into the surrounding soil or water.

Bioaccumulative Potential

No information is available for the pure product or the ingredients based on the literature reviewed.

Mobility in Soil

If released to soil via leaching from CCA treated wood, most leaching takes place in the first few days and the extent and rate of leaching being highest for copper and lowest for chromium. Leaching of metals is highly variable and is dependent on environmental conditions. In most cases, after migration of the metals a few meters down into soil, these metals attain the background level concentration of soil.

Other Adverse Effects

No information is available for the pure product or the ingredients based on the literature reviewed.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Store product for disposal as described under Storage in Section 7 of this safety data sheet.
Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG Regulations.

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	1556	R.Q.arsenic compounds, liquid, n.o.s (ARSENIC ACID)	6.1	II
US DOT	1755	Chromic acid solution (Chromium trioxide)	8	II
IMO (Marine)	3077	Environmentally hazardous substance, solid, N.O.S. (copper oxide) (Cupric oxide)	9	III
IATA (Air)	3077	Environmentally hazardous substance, solid, N.O.S. (copper oxide) (Cupric oxide)	9	III

Environmental Hazards Marine Pollutant (Arsenic acid)

Special Precautions for User Please note: No information is available for the pure product based on the literature reviewed.
Wood and wood products treated with wood preservatives are exempt from TDG regulations.
Information is presented for ingredients:
Arsenic acid: this compound is listed as a marine pollutant by the D.O.T (49 CFR 172.101, Appendix B.
Copper oxide: marine pollutant

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Wood and wood products are exempt from WHMIS reporting requirements and classification and disclosure is voluntary on MSDS. GHS reporting requirements are based on the intended use of the product.

Canada

WHMIS Classification

Class D1A

Class D2A; D2B

D1A - Very Toxic; D2A - Very Toxic (Teratogenicity/embryotoxicity; Carcinogenicity; Respiratory tract sensitization); D2B - Toxic (Skin irritant; Eye irritant; Skin sensitization)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Copper oxide, arsenic acid, and chromium trioxide are listed on the DSL/NDSL.

CEPA - National Pollutant Release Inventory (NPRI)

Arsenic acid is Listed as 'Arsenic and its compounds' (Part 1B) and chromium trioxide is listed as 'hexavalent chromium and its compounds' (Part 1B).

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Copper oxide, arsenic acid, and chromium trioxide are listed on the TSCA Listing.

Additional USA Regulatory Lists

Arsenic Acid:
CERCLA Sections 102a/103 (40 CFR 302.4): Arsenic acid, 1 lb (0.454 kg) reportable quantity (RQ)
SARA Title III Section 313 (40 CFR 372.65): Arsenic acid, 0.1% minimum concentration (related to Arsenic inorganic compounds)
SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):
Acute health: Yes.
Chronic health: Yes.

Chromium Trioxide:
Section 6, 0.1 % de minimus concentration [see 40 CFR 749.68]
SARA Section 313 subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Copper Oxide:
SARA 302 Components: not subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components: Copper oxide is subject to reporting levels established by SARA Title III, Section 313:

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.
CERCLA: All substances listed under Section 304 CERCLA hazardous substances (i.e., any substance that requires an SDS).
RCRA: All chemicals covered under RCRA
CCA: Not applicable

State Regulations:
California Proposition 65: WARNING! This product contains a chemical (arsenic inorganic compounds and chromium (VI) compounds) known to the state of California to cause cancer, birth defects, and other reproductive harm; and a chemical known to the state of California to cause cancer, respectively.

Chemical	CAS #	Percent by Weight

Arsenic acid (arsenic inorganic compounds)	7778-39-4	1-4
Chromium Trioxide (Chromium (VI) compounds)	1333-82-0	1-4

US State Notifications & Warnings:

New Jersey
Identification: Right-to-Know
Warning: arsenic acid; chromium trioxide; copper oxide; wood dust

Pennsylvania
Identification: Right-to-Know
Warning: chromium trioxide; copper oxide; wood dust

Minnesota
Identification: Right-to-Know
Warning: chromium trioxide; wood dust

Massachusetts
Identification: Right-to-Know
Warning: chromium trioxide

Florida
Identification: Right-to-Know
Warning: chromium trioxide

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 2** **Flammability - 2** **Instability - 0**
Based on softwood, allergenic and non-allergenic species

SDS Prepared By Amec Foster Wheeler Environment & Infrastructure

Phone No. 604-294-3811

Date of Preparation September 30, 2015

Key to Abbreviations
% - Percent
°C – Degrees Celsius
°F – Degrees Farenhuit
hr – Hour
kg - Kilogram
L - Litre
Ppm - parts per million
LC50 – Airborne concentration required to produce 50% mortality in animal test subjects.
LD50 – Dose (provided either orally, or dermally) required to produce 50% mortality in animal test subjects.
mg/m3 – milligrams of contaminant per cubic metre of air
mmHg – Millimetres of mercury
N.Ap. – Not applicable
N.Av. Not available
ACGIH – American Conference of Governmental Industrial Hygienists
CALIFORNIA EPA PROPOSITION 65 – List of Carcinogens and Reproductive Toxins recognized in California Environmental Protection Agency
CAS No. – Chemical Abstract Society Number
CERCLA – US Comprehensive Environmental Response, Compensation, and Liability Act
PEL – Permissible Exposure Level
RCRA – US Resource and Conservation Recovery Act
REL – Recommended Exposure Limit
SARA TITLE III – US Superfund Amendments and Reauthorization Act
TLV – Threshold Limit Value

TSCA – US Toxic Substances Control Act
TWA – Time Weighted Average
UN/NA – United Nations / North American Product Identification Number
WHMIS – Workplace Hazardous Materials Information System
AIHA = American Industrial Hygiene Association
HSDB® = Hazardous Substances Data Bank
NTP = National Toxicology Program
OSHA = US Occupational Safety and Health Administration
RTECS® = Registry of Toxic Effects of Chemical Substances
GHS - Global Harmonized System

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Disclaimer

This product has been classified in accordance with the hazard criteria for the Controlled Products Regulations (CPR) and the Global Harmonized System (GHS) and the MSDS / SDS contains all of the information required by the CPR and GHS." At the time of preparation, the information and data contained in this MSDS / SDS are believed to be accurate and have been compiled from sources that are believed to be reliable (e.g., CCOHS CHEMINFO, HSDB, RTECS, DSL/NDSL, ESIS, ECHA, online information).

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