

SAFETY DATA SHEET

1. Identification

Product identifier Alkaline Copper Quaternary (ACQ) Treated Wood
Other means of identification 220
Recommended use Preservative Treated Wood for various interior and exterior applications.
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Licensees/Customers of Koppers Performance Chemicals Inc.

Company name

Address

Telephone number

Contact person

Emergency phone number

E-mail

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1A
Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

OSHA defined hazards Combustible dust

Label elements



Signal word

Danger

Hazard statement

Causes skin irritation. Causes serious eye irritation. May cause cancer by inhalation. May cause respiratory irritation. May form combustible dust concentrations in air.

Precautionary statement

Prevention

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. Prevent dust accumulation to minimize explosion hazard. Ground/bond container and receiving equipment. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Response

If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. In case of fire: Use CO₂, foam or water spray for extinction.

Storage

Store in a well-ventilated place. Keep container tightly closed. 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	> 90
Monoethanolamine (MEA)	141-43-5	< 6
Copper complex expressed as Copper oxide	Proprietary	< 2

Composition comments

Depending on the additives applied to the treating solution, this wood may also contain <1% of mold inhibitors, <1% of a wax emulsion, and <1% of a colorant.

This product contains one of the below listed Quaternary Ammonium compounds:

Alkyl dimethyl benzyl ammonium chloride, CAS 68391-01-5, < 2%

Didecyl dimethyl ammonium chloride, CAS 7173-51-5, < 2%

Didecyl dimethyl ammonium carbonate and Didecyl dimethyl ammonium bicarbonate, CAS Proprietary, <2%

Certain West Coast species of wood may contain ammonia which replaces some of the MEA:

Ammonia (expressed as NH₃), CAS 1336-21-6, <1%

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.

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.

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	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	For good industrial practice avoid release to the environment.

7. Handling and storage

Precautions for safe handling	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

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
Monoethanolamine (MEA) (CAS 141-43-5)	PEL	6 mg/m ³ 3 ppm

ACGIH

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

US. ACGIH Threshold Limit Values

Components	Type	Value
Monoethanolamine (MEA) (CAS 141-43-5)	STEL TWA	6 ppm 3 ppm

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Copper complex expressed as Copper oxide (CAS Proprietary)	TWA	1 mg/m ³	Dust and mist.
Monoethanolamine (MEA) (CAS 141-43-5)	STEL TWA	15 mg/m ³ 6 ppm 8 mg/m ³	
Wood/Wood dust (CAS N/A)	TWA	1 mg/m ³	Dust

Biological limit values No biological exposure limits noted for the ingredient(s).

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.

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	Not available.
Odor	Ammoniacal wood odor possible.
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)	Not available.
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 acids. Alkalis. Oxidizers.
Hazardous decomposition products	Combustion products may yield irritating and toxic fumes and gases including organic chloride, aldehydes, amines, hydrogen chloride, ammonia, copper compounds, oxygen, boric oxide, oxides of carbon and nitrogen.

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	Causes serious eye irritation.
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.

Components	Species	Test Results
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Monoethanolamine (MEA) (CAS 141-43-5)

Acute

Dermal LD50	Rabbit	1025 mg/kg
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Oral LD50	Rat	1715 mg/kg
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Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

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.
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NTP Report on Carcinogens

Wood/Wood dust (CAS N/A)	Known To Be Human Carcinogen.
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OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
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.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous.

Components	Species	Test Results
Monoethanolamine (MEA) (CAS 141-43-5)		
Aquatic		
Algae	EC50 <i>Selenastrum capricornutum</i> (new name <i>Pseudokirchnerella subca</i>)	2.5 mg/l, 48 hours
Crustacea	EC50 <i>Daphnia magna</i>	65 mg/l, 48 hours
Fish	LC50 <i>Cyprinus carpio</i>	349 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Monoethanolamine (MEA) (CAS 141-43-5) -1.31

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 Dispose in accordance with applicable federal, state, and local regulations. Do not discharge into drains, water courses or onto the ground.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code Not regulated.

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)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Copper complex expressed as Copper oxide (CAS Proprietary) LISTED

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

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Copper complex expressed as Copper oxide	Proprietary	< 2

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.

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

Monoethanolamine (MEA) (CAS 141-43-5)

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

Copper complex expressed as Copper oxide (CAS Proprietary)

Monoethanolamine (MEA) (CAS 141-43-5)

Wood/Wood dust (CAS N/A)

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


Monoethanolamine (MEA) (CAS 141-43-5)

Wood/Wood dust (CAS N/A)

US. Rhode Island RTK

Copper complex expressed as Copper oxide (CAS Proprietary)

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 04-21-2015
Revision date 02-24-2017
Version # 03
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

Copper/Quat at 2:1 ratio

	0.15 pcf	0.20 pcf	0.40 pcf	0.60 pcf
Copper complex expressed as Copper Oxides	0.28 - 0.58%	0.38 - 0.77%	0.75 - 1.54%	1.13 - 2.32%
Quaternary Ammonium Compound	0.14 - 0.29%	0.19 - 0.39%	0.38 - 0.77%	0.57 - 1.16%

Copper/Quat at 1:1 ratio

	0.15 pcf	0.20 pcf	0.40 pcf	0.60 pcf
Copper complex expressed as Copper Oxides	0.21 - 0.44%	0.28 - 0.58%	0.56 - 1.16%	0.85 - 1.74%
Quaternary Ammonium Compound	0.21 - 0.44%	0.28 - 0.58%	0.56 - 1.16%	0.85 - 1.74%

HMIS® ratings

Health: 2*
Flammability: 1
Physical hazard: 0
Personal protection: E

NFPA ratings



Disclaimer

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