SAFETY DATA SHEET

1. Identification

Product identifier **Alkaline Copper Quaternary (ACQ) Treated Wood**

Other means of identification

SDS number 262-TIM-E

Recommended use Preservative Treated Wood for various interior and exterior applications.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Customers of Timber Specialties Limited

Company name
Address

Telephone
E-mail
Contact person
Emergency phone number

2. Hazard(s) identification

Physical hazards	Combustible dusts	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity (inhalation)	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards Not classified.

Label elements

Hazard symbols

Signal word Danger

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

Precautionary statement

Prevention Obtain special instructions before use (see Section 16). Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices.

Response IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If exposed or concerned: Get medical advice/attention. In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water fog for extinction.

Disposal Dispose in accordance with local/regional/national/international regulations.

Other hazards None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Wood dust	N/A	90 - 98
Monoethanolamine	141-43-5	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 emulsion, and <1% of a colorant. Copper complex expressed as Copper Oxides < 2%.
Depending on the source of copper preservative, this product may contain the following: Boric acid CAS No:10043-35-3 at < 1%.
This product contains one of the below listed Quaternary Ammonium compounds: Alkyl dimethyl benzyl ammonium chloride CAS No: 68391-01-5 at < 1%, Didecyl dimethyl ammonium chloride CAS No: 7173-51-5 at < 1%, Didecyl dimethyl ammonium carbonate and Didecyl dimethyl ammonium bicarbonate CAS No: Proprietary at < 1%. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals.

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. 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 attention.

Ingestion

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

Most important symptoms/ effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. Skin irritation. May cause redness and pain. Dust may cause eye, skin and respiratory tract irritation. 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. Mechanical irritation of skin, eyes and respiratory system.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

If exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, dry powder or water fog. Apply extinguishing media carefully to avoid creating airborne dust.

Unsuitable extinguishing media

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

Specific hazards arising from the chemical

Explosion hazard: 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.

Fire-fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Use only non-sparking tools. Avoid generation and spreading 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. Flush area with water. Clean surface thoroughly to remove residual contamination. For waste disposal, see Section 13.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Read SDS before use. Avoid prolonged or repeated breathing of dust. Avoid prolonged or repeated contact with skin. Do not smoke. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Wear appropriate personal protective equipment (See Section 8). Avoid release to the environment. Do not burn preserved wood. Do not use preserved wood as mulch.
Conditions for safe storage, including any incompatibilities	Keep away from heat, spark, open flames and other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	TWA	1 mg/m3	Inhalable fraction.
Monoethanolamine (CAS 141-43-5)	STEL TWA	6 ppm 3 ppm	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	TWA	0.5 mg/m3	Total dust.
Monoethanolamine (CAS 141-43-5)	STEL TWA	15 mg/m3, 6 ppm 7.5 mg/m3, 3 ppm	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	TWA	1 mg/m3	Dust.
Monoethanolamine (CAS 141-43-5)	STEL TWA	6 ppm 3 ppm	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) Components

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

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	STEL TWA	10 mg/m3 1 mg/m3	Dust. Dust.
Monoethanolamine (CAS 141-43-5)	STEL TWA	6 ppm 3 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	TWA	2.5 mg/m3	Dust.
Monoethanolamine (CAS 141-43-5)	STEL TWA	15 mg/m3, 6 ppm 7.5 mg/m3, 3 ppm	

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

Appropriate engineering controls	Observe any medical surveillance requirements. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

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	Leather gloves provide sufficient hand protection. Chemical resistant gloves may be necessary for handling freshly treated wood.
Other	Wear long sleeve shirt, pants, and closed-toed shoes when handling wood.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Wear dust mask when sawing or sanding wood. If exposure limits are exceeded or if irritation is experienced, a NIOSH-approved positive pressure self-contained breathing apparatus should be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, chewing gum, using tobacco, or using the toilet.

9. Physical and Chemical Properties

Appearance	
Physical state	Solid.
Form	Solid. Chips. Dust.
Color	Varies.
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.
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 available.
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	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid contact with incompatible materials. Minimize dust generation and accumulation.
Incompatible materials	Strong acids. Alkalis. Strong oxidizing agents.

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	May cause irritation to the respiratory system. 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	Causes skin irritation. 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. Dust may irritate the eyes.
Ingestion	Not likely, due to the form of the product. However, ingestion of high concentrations 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	Severe eye irritation. Skin irritation. 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
Monoethanolamine (CAS 141-43-5)		
Acute		
Dermal LD50	Rabbit	1025 mg/kg
Oral LD50	Rat	1715 mg/kg

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.

Canada - Alberta OELs: Irritant

Monoethanolamine (CAS 141-43-5) Irritant.

Canada - Manitoba OELs Hazard: Dermal sensitization

Wood/Wood dust (CAS N/A) Dermal sensitization

Canada - Manitoba OELs Hazard: Respiratory sensitization

Wood/Wood dust (CAS N/A) Respiratory sensitization

Canada - Saskatchewan OELs Hazard Data: Sensitiser

Wood/Wood dust (CAS N/A) Sensitizer

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 data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	May cause cancer by inhalation. This classification is based on an increased incidence of nasal and paranasal cancers in people exposed to wood dusts.

ACGIH Carcinogens

Wood/Wood dust (CAS N/A) A1 Confirmed human carcinogen. A2 Suspected human carcinogen.

Canada - Manitoba OELs: carcinogenicity

Wood/Wood dust (CAS N/A)	Confirmed human carcinogen. Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Wood/Wood dust (CAS N/A)	1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Wood/Wood dust (CAS N/A)	Known To Be Human Carcinogen.

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

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Monoethanolamine (CAS 141-43-5)		
Aquatic		
Algae EC50	*Selenastrum capricornutum* (new name *Pseudokirchnerella subca*)	2.5 mg/l, 48 hours
Crustacea EC50	*Daphnia magna*	65 mg/l, 48 hours
Fish LC50	*Cyprinus carpio*	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 (CAS 141-43-5)	-1.31

Mobility in soil This product is insoluble in water.

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 of contents in accordance with municipal, provincial, and federal regulations. DO NOT BURN! Ash may be toxic and a hazardous waste; combustion vapors may be toxic.

Local disposal regulations Dispose in accordance with provincial requirements.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose in accordance with local regulations. This material must be disposed of in a safe manner (see: Disposal instructions).

14. Transport information

TDG 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

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention	Not applicable.
Rotterdam Convention	Not applicable.
Kyoto protocol	Not applicable.
Montreal Protocol	Not applicable.
Basel Convention	Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	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

Issue date	04-28-2017
Revision date	01-30-2019
Version No.	03
Special instructions	If you expect to generate wood dust, read Sections 4, 7, 8, and 11.
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.

Retention levels

Copper/ADBAC	4.0 kg/m^3 (0.25 pcf)	6.4 kg/m^3 (0.40 pcf)
Copper complex expressed as Copper Oxides	2.67	4.27
Alkyl dimethyl benzyl ammonium chloride	1.33	2.13

Copper/Carboquat	4.0 kg/m^3 (0.25 pcf)	6.4 kg/m^3 (0.40 pcf)
Copper complex expressed as Copper Oxides	2.67	4.27
Didecyl dimethyl ammonium carbonate and Didecyl dimethyl ammonium bicarbonate	1.33	2.13

Copper/DDAC 2:1 ratio	2.0 kg/m^3 (0.12 pcf)	4.0 kg/m^3 (0.25 pcf)	6.4 kg/m^3 (0.40 pcf)
Copper complex expressed as Copper Oxides	1.33	2.67	4.27
Didecyl Dimethyl Ammonium Chloride	0.67	1.33	2.13

Copper/DDAC 1:1 ratio	2.0 kg/m^3 (0.12 pcf)	4.0 kg/m^3 (0.25 pcf)	6.4 kg/m^3 (0.40 pcf)
Copper complex expressed as Copper Oxides	1.00	2.00	3.20
Didecyl Dimethyl Ammonium Chloride	1.00	2.00	3.20