

Treated Lumber & ACQ

Contributed by Robert Cox

ON JANUARY 1, 2004 the Environmental Protection Agency (EPA) has banned the use of Chromated Copper Arsenate (CCA) as a preservative in treated lumber in residential and commercial construction. This was in an effort to reduce the use of arsenic and increase the safety level. Alkaline Copper Quaternary (ACQ) is a non-arsenic wood preservative that has become the treated lumber industry's answer to this EPA requirement.

METAL'S REACTION TO ACQ

While effective as a wood preservative, ACQ pressure-treated lumber has an increased copper component. These chemicals are 5 times more corrosive to common steel according to American Wood Preservers Association (AWPA) test results.

ACQ FASTENER REQUIREMENTS

2003 International Residential Code - Fastener Statement, Section R319.3: "Fasteners for pressure-preservative treated wood shall be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Exception: One-half inch (12.7mm) diameter or greater steel bolts." Also note the requirements for exterior use require hot dipping.

Electroplated galvanized fasteners are not recognized as being corrosion resistant for exterior applications.

REACTION WITH OTHER MATERIALS

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Any Kynar painted material on steel or aluminum is chemically inert and can be used in direct contact with ACQ pressure-treated wood. Paint should contain 70% Kynar 500.

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The galvanized steel sheet used with treated lumber should be a hot dipped galvanized steel sheet produced on continuous coating line, by passing raw steel through a bath of molten zinc. Galvanized steel having a C-90 coating (1.25 oz. per square foot), can be used in direct contact with ACQ wood.

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Mill finish aluminum should not be used in direct contact with ACQ treated lumber. Spacer materials or other physical barriers are recommended (i.e. rubber, felt, etc.) To prevent direct contact of ACQ pressure-treated wood and mill finish aluminum products. Anodizing improves resistance to deterioration.

RECOMMENDATIONS

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Require nails which conform to the ASTM A-153 specification for hot-dipped galvanizing.

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Discuss stainless steel screw fasteners use with A/E.

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Aluminum should not be used in direct contact with ACQ treated lumber