Copper Naphthenate Corrosivity Data

As shown in the table and graph below, wood treated with waterborne copper naphthenate (CuN-W) has very low corrosivity to the metals specified in AWPA Standard E12, and compares favorably with CCA-C and the untreated controls. Oil-borne copper naphthenate is even less corrosive, as would be expected from a non-aqueous formulation.

Waterborne and oil-borne copper naphthenate and untreated controls were not statistically different from each other and the cleaning blanks against mild steel. The untreated controls, oil-borne CuNap, and cleaning blanks were statistically similar for galvanized steel, as were waterborne copper naphthenate treatments and CCA. Only ACQ treated wood corrosivity toward aluminum is statistically different from the untreated controls and cleaning blanks. The corrosivity of treated wood toward brass was less than 0.15 mpy for all of the tested preservative systems. For more information, call 1-800-795-4980 or email cunap8@aol.com.

CORROSION OF METALS IN CONTACT WITH PRESERVATIVE-TREATED SOUTHERN YELLOW PINE USING AWPA STANDARD E12

TREATMENT/ RETENTION	AVERAGE CORROSION RATE, mils/year			
	C1010 MILD STEEL	GALVANIZED STEEL (HD)	AL 1514 ALUMINUM	CDA 230 RED BRASS
CuN-W (0.11 pcf)	0.174	0.414	-0.058	0.047
Oil-borne CuN (0.08 pcf)	0.031	0.089	0.073	0.017
ACQ-D (0.41 pcf)	4.869	0.907	7.301	0.111
CCA-C (0.41 pcf)	1.049	0.375	0.294	0.017
Untreated control	0.009	0.141	0.049	0.003
Cleaning blanks	0.029	0.119	0.314	-0.033