

FrameGuard® Mold Resistant Wood

AWPA E12 Corrosion Testing



PRODUCT DATA

Scope

An AWPA standardized test was conducted to determine the corrosion rate potential of various metals which may be used to connect, or otherwise come in contact with, FrameGuard® Mold Resistant Wood.

Experimental

AWPA Standard E12 was followed for this test. AWPA E12 defines sample preparation, wood and metal coupon size, test assembly procedures, exposure conditions, cleaning, and calibration. AWPA E12 recommends exposure of the samples for 10-14 days at 120° F/90%, RH. *This test was modified to extend the exposure periods and to include samples exposed for 30 and 60 days to better simulate long term use.*

Standardized metal test coupons – 2024 aluminum, 1010 carbon steel, hot dipped galvanized steel, and G90 electroplated galvanized steel – were used in these tests. Coupons were sandwiched between untreated wood

samples, and between samples that had been spray-treated with FrameGuard™ coating. These test assemblies were subjected to the temperature and relative humidity conditions as described above. After exposure periods of 30 and 60 days, the assemblies were removed from the test chamber and the metal coupons were cleaned of any corrosion. Also, control coupons were cleaned to determine the percent loss during the cleaning process to account for losses that were not a result of actual corrosion of the test specimen. The weight of the coupons before and after the exposure test were then used to calculate projected corrosion potential in mils per year (mpy), a traditional unit of measure for engineering design.

Conclusions

AWPA E12 coupon corrosion measurements on FrameGuard® mold resistant wood indicate that, after both 30 days and 60 days in the exposure chamber, the average weight loss was very low (≤ 1.2 mpy). These losses

are similar to those of untreated controls for all metals tested. The results are considered excellent, especially in light of the extended test time of up to 6 times the standard duration of 10-14 days.

AWPA E12 Corrosion Coupon Results Summary
Mils per year (mpy) Loss

Preservative Type	Days Exposure	AL2024	C1010	HD Galv.	G90
Control	30	0.0	0.0	0.6	0.3
FrameGuard	30	0.1	0.2	0.3	0.7
Control	60	0.0	0.0	0.4	0.9
FrameGuard	60	0.1	0.3	0.3	1.2