

# Accelerated Weathering of TimberSIL<sup>®</sup> Products



**Prepared for  
Timber Treatment Technologies**

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## Accelerated Weathering Testing of TimberSIL<sup>®</sup> Wood Products ASTM G151

Materials: TimberSIL<sup>®</sup> samples -- 30 samples of southern yellow pine each 3 inches by 11 inches were prepared by TTT according to the TimberSIL<sup>®</sup> process.

Sample Boards were prepared as follows: Four TimberSIL wood samples each were coated with one of five common aftermarket stains and sealers: Olympic, Thompsons, Valspar, Flood, Behr, providing a total of 20 TimberSIL samples coated with stain/sealers. The remaining 10 samples were uncoated TimberSIL<sup>®</sup> control samples.

Equipment: Q PANEL LABS – Digital QUV Accelerated Weathering Tester Model 1079

Procedure: Testing for Exposed Sunlight and Moisture, per ASTM G151 was conducted on the above described samples and control boards under the following conditions. Each board was placed into the Q PANEL LABS – Digital QUV Accelerated Weathering Tester Model 1079 for testing for 1100 hours, simulating a 10 year exposure period. Methodology included 92 cycles of exposure to High Levels of intense Ultra Violet Light, Simulated Rain through exposure to DI water, and temperature changes creating heavy condensation. Three consecutive exposures comprising each exposure cycle were:

Step 1 - High Level QUV (UVA 340 Lamps) @ 60 °C for 8 hours

Step 2 - DI Water Spray for 5 Minutes

Step 3 - Condensation at 40 °C for 3 hours and 55 minutes

Results Summary: After an 1100 hour accelerated exposure period, simulating a 10-year exposure, each sample was examined for the impact of accelerated weathering on the coatings and the warping, cracking and splitting impact on the boards. The aftermarket coatings maintained an acceptable bond to the TimberSIL wood samples and showed no evidence of wash off or flake off. All uncoated TimberSIL control samples showed fading (silvering) due to the UV exposure. Overall TimberSIL treated wood appearance met acceptable standards at the end of the 1100-hour exposure period. Images of selected samples of TimberSIL<sup>®</sup> stain and sealant samples after accelerated weathering are shown below.



Olympic



Thompsons



Valspar



Flood



Behr