



Laboratory Tests

Fiberglass Composite Posts



Composite Materials Technology Center

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WEATHEROMETER TESTING

We have completed 2000 hours of exposure on the Rhino Fiberglass Composite Post samples. The exposure test followed ASTM G53 (Standard practice for light and water exposure of nonmetallic material.) The cycle of exposure of the specimens was 4 hours of UV light at 60 deg. C. followed by 4 hours of condensation at 50 deg. C. in a Qpanel Accelerated Weathering Tester with UVA-340 lamps as the light source. The lamps are rotated every 400 hours to maintain an even light distribution over the specimens. The test was conducted from 3-2-98 through 5-26-98 at Winona State University, COMTEC testing lab..

RHINO FIBERGLASS COMPOSITE POSTS

The PolyTech coated sample appearance shows minimal dulling of the surface gloss while the uncoated samples are very dull with glass fibers being exposed on the surface. Tensile and flex tests have been conducted on the exposed samples and on unexposed samples, the test results show an increase in the coated sample values and a decrease in uncoated sample values.

TENSILE TEST - COATED

Displacement (in)	Load (lb)	Stress (psi)	Modulus (psi)	
0.0157	2642	48040	3270000	Control
0.0196	3297	57000	3738000	2000 hrs UV

TENSILE TEST - UNCOATED

Displacement (in)	Load (lb)	Stress (psi)	Modulus (psi)	
0.0176	3149	57250	3541000	Control
0.0143	2733	48610	4171000	2000 hrs UV

FLEX TEST - COATED

Displacement (in)	Load (lb)	Stress (KSI)	Modulus (KSI)	
0.245	127.503	56065.5	1793	Control
0.232	152.580	69044.5	1862	2000 hrs UV

FLEX TEST - UNCOATED

Displacement (in)	Load (lb)	Stress (KSI)	Modulus (KSI)	
0.192	123.855	57282.3	2142	Control
0.213	127.394	56204.6	2050	2000 hrs UV

COMTEC

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