

## Effect of Ultraviolet Light on K-100™

For cranes frequently operating in outdoor environments, synthetic rope degradation due to ultraviolet (UV) light can be a point of concern. The design of K-100™ incorporates a proprietary coating to mitigate UV degradation and extensive testing was conducted to confirm its effectiveness.

Samson's research and development team collaborated with a worldwide leader in polymer coating additives to enhance UV protection of K-100. The objective was to provide UV protection without adversely impacting other performance characteristics of the rope.

To quantify the efficacy of Samson's proprietary coating on K-100, accelerated UV testing was conducted per ASTM G154: Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials. Samples were tested in various intervals of simulated Miami, Florida sun; the worst case scenario being one year of constant exposure. Tensile break tests were conducted prior to and after the simulation. Test results confirmed the rope maintained 90% of new rope strength following exposure simulating one year in Miami sunlight.



### UV Testing / Simulated Miami Florida Sun

