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RESINS | GEL COATS | COLORANTS

CASE HISTORY



Pultruded Ladder Rails

Market Segments: Consumer

Composite Applications: Step Ladder

Resin: PulTru® P533-300

Extension Ladders: 24 and 28 feet
(7.3 and 8.5 meters)

Manufacturing Process: Pultrusion
Resin Infusion

Hull Lengths: 32 to 54 Feet
(9.8 to 16.5 meters)



To start a revolution in ladder design, Werner Co. chooses a bold graphic based on the American flag that first became a standard during the most famous revolution in world history. The Stars and Stripes graphic gleams through a new clear resin technology developed by AOC.

Called FiberGraphix™, Werner’s revolutionary technology allows unique, permanent graphics to be seamlessly manufactured into the ladder rail as the profile is being pultruded. The first FiberGraphix application is the red, white and blue motif on new “USA” step and extension ladder products.

Werner developed its technology with help from its surfacing veil supplier and from resin supplier AOC. “AOC Pultrusion Product Leader Jim Tedesco is extremely knowledgeable about resin formulations,” says Harold Piraneo, Senior Buyer for Werner. “We told Jim what we were doing and asked if he could develop a clear resin that would improve the colorfastness of the graphics printed on the veil.”

New UV-Resistant Technology

Tedesco responded to the challenge by developing new clear PulTru P533-300 pultrusion resins with exceptional

Pultruded Ladder Rails, continued

ultraviolet resistance. The technology protects the printed colors against fading and discoloration caused by exposure to sunlight.

Based on rigorous Werner testing, the processing characteristics and physical properties of the clear PulTru P533-300 resin system are similar to those of a conventional PulTru system for ladder rails. According to Werner, FiberGraphix-enhanced ladders offer the same dimensions, strength, safety and high quality of solid color Werner ladders with comparable duty ratings.

Piraneo says the Pultrusion Laboratory at AOC's Valparaiso, IN, site helped speed the commercialization of FiberGraphix technology. "By having a production-scale pultruder on site, AOC was able to run a number of trials and tests with full-size samples," he points out. "We were able to evaluate different dyes and pigments for the veil as well as different formulations for the resin. The total technology package was optimized for production start-up without tying up our production equipment."

The USA ladder series is just the beginning for this revolutionary concept in ladder design. Werner is expanding its unique new market niche with more FiberGraphix art for the AOC resin technology to protect.

About AOC

AOC is a leading global supplier of resins, gel coats, colorants, additives and synergistic material systems for composites and cast polymers. For more information on AOC technology, quality and service, e-mail sales@aac-resins.com, phone (866) 319-8827, or go to AOC-RESINS.com.