

Polyethylene roll up door panels

PLASTICS IN
TRANSPORTATION

by Denise Yonney

Quality conscious companies in the truck and trailer industry had a problem. Over time, they were seeing peeling, warping, cracking and overall degradation of the face of the roll up doors. These doors were a painted plywood structure that typically carried no warranty as far as the aesthetics on the face of the boards. Laminators, Inc. was asked to quote a solution to the problem.

The challenge

Laminators was a very active supplier to the trailer industry, but a few years ago they shifted the strategic focus of their company more towards other markets due to the ultra competitive nature of the trailer industry. Since they had many years of past experience in this field, they decided to develop a solution. Laminators proposed a laminate panel manufactured with outer polyethylene skins, which were a special proprietary UV grade of polyethylene (PE). The core center is furniture grade plywood selected to be lighter and stronger than traditional materials. S & L Plastics Inc. worked with Laminators to develop the proprietary polyethylene face material, assure color, test for color fastness and shifting and process the resin. S & L has worked with Laminators for years and is known for their reputation in producing a superb flatness grade of thin polyolefin sheet. Flatness is critical to the quality output of the lamination process.

The solution and benefits of using polyethylene

The UV grade of polyethylene is formulated to help protect the compound from degradation caused by the ultraviolet rays of the sun. It is also formulated to keep the product color fast so there is little or no fade or chalking. The initial sheet at the production stage is quality checked using a Greta Mac Beth, colorimeter. The standard is a metal chip supplied by the customer that is based on the hue that the truck body is painted.

The benefits of the polyethylene were that it is easily cleaned, relatively resistant to scratches and graffiti, gives even color dispersion throughout the thickness of poly skin, won't peel, is very durable and can be custom run in any color to match the truck. In comparison to substitute products, it is also very economical. Laminators offers a 10-year warranty on their products; however, they have customers who have still been using the same panels for close to 20 years.

The S & L Plastics poly is used in two different gauges — a thicker .100" for the outer skin and a .030" for the inner. All polyethylene faces have a high polish finish and are poly-masked in line to protect the outer surface of the sheet. Tests are done during the run to monitor the flatness and squareness of the sheet to Laminators specifications.

Laminators has been a pioneer in the specialty bonding of polyolefin sheet for nearly 20 years. Laminators uses proprietary bonding techniques and adhesives to create the door panels to the customers' exacting specifications and engineers the door panels to the customers' performance requirements.

After lamination, the large panels are cut into smaller panels. These panels are shipped to the customer for assembly of the roll up doors. The truck manufacturer generally has their own hardware system for the door, or subs the door assembly out to others. After the hard-

ware is in place, the doors are mounted and hung on the track; the system is then installed in the tail of the cargo area or the truck.

John Wright, director of engineering for Laminators, says, "It's very seldom you see over 35 years of outdoor experience with relation to one product — our records support that claim." ■

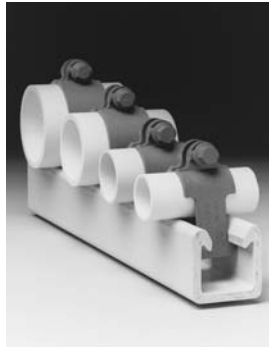
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