

DERAKANE EPOXY VINYL ESTER RESINS

High-Speed Pultrusion Application

DERAKANE MOMENTUM™ 640 series resins from Ashland Composite Polymers work well with high-speed pultrusion applications.

Using this resin, fabricators have achieved line speeds faster than those recorded using any other vinyl ester or iso-unsaturated polyester resins.

One such high-speed application is an optical fiber tension member. Since optical glass-fibers cannot carry any loads, they have to be reinforced with very strong, but very thin, pultruded tension members (1 to 3 millimeters in diameter). Speeds as fast as 10 meters a minute have been achieved using this resin.



Other high-speed applications currently using this new resin are high-performance gratings, ladder rails, cable trays, structural profiles for sewage plants and cooling towers. The typical thickness for these profiles ranges from 4 to 9 millimeters and pultrusion speeds can reach from 1.5 meters to 1.9 meters a minute.

In addition to higher pultrusion speed, the DERAKANE MOMENTUM 640 series resins have higher reactivity and lower styrene content than any other vinyl ester resin, resulting in better surface quality and gloss and less shrinkage and warpage in the final product.

Early trials with carbon fibers have resulted in very good inter-laminar shear and compressive strength, indicative of excellent fiber-maxtrix interface adhesion.