

CaseHistory

Vipel® Makes a Better Pool



An installed Roman Style model upgrades the entertainment and property values of the customer's home

Resins:	Vipel F010 bisphenol A epoxy vinyl ester Vipel F764 isophthalic polyester
Colorant:	Chroma-Tek® white
Manufacturing Processes:	Hand lay-up Spray-up
Composite Application:	Swimming pool
Size range:	7 feet-4 inch square (2.2 meter) spas to 40 feet long by 16 feet wide (12.2 by 4.9 meter) pools

Higher gasoline prices have many families upgrading the entertainment value of their homes with a composite in-ground swimming pool from Leisure Pools. Escapes to the backyard pool are replacing costly road trips while creating quality family time together. Leisure Pool's quality is noticed in the marketplace. The company is the second largest pool manufacturer in the world. Because Leisure Pools sets such high standards, the company is able to warrant the structural integrity of its pools for a lifetime. Leisure Pools quality begins with precision molds that are supported with steel substructures. Compared to lower cost wood, steel is significantly more rigid, resists flexing, and does absorb atmospheric conditions.

Leisure Pool owners also benefit from strict quality control where every phase of the manufacturing

Vipel® Makes a Better Pool, continued

process meets or exceeds standards. Using only the best raw materials, Leisure Pools manufactures with high performance Vipel® vinyl ester and isophthalic polyester resins supplied by AOC.

“Because we adhere to such high standards, some people have suggested that our pools are overdesigned,” said Ashley Gill, Chief Executive Officer. “Sure, we could cut costs by using a little less material or a slightly lower performing material. But we want the pool to be in the same condition upon arrival as it was in when it left the factory. And we want the pool to stay that way for years to come.”

Leisure Pool manufacturing process

After meticulous mold preparation, pool construction begins with the application of a chemical- and weather-resistant gel coat.

To protect against osmotic blistering, the gel coat is backed up with a barrier coat of chopped glass fibers in Vipel F010, a high performance bisphenol A epoxy vinyl ester resin from AOC. “Our high-volume spray gun is chopping three strands of continuous fiberglass roving at once into the resin stream,” Gill said. “Vipel F010 vinyl ester has very good wetting characteristics for this operation as well as superior barrier properties that protect the gel coat against moisture and blistering.”

The final step in the Leisure Pool manufacturing is the structural laminate consisting of layers of chopped fiberglass and woven roving. The structural laminate resin is Vipel F764, an isopolyester that is widely specified for corrosion-resistant equipment such as water and fuel storage tanks. A white Chroma-Tek® colorant, also from AOC, is added to resin to enhance the aesthetics of the structural laminate.

Isopolyester vs. general purpose

“To our knowledge we are the only U.S. pool manufacturer to use this type of high quality resin instead of a general-purpose resin,” Gill states. “In the shop, Vipel F764 isopolyester is a very nice resin to work with. In the ground as part of the finished product, this resin is a major factor in why we make the most solid, best-built pools possible.”



Good fiber wetting with the AOC vinyl ester facilitates the application of a barrier coat that protects the gel coat surface from blister-causing osmosis



A finished Grand Elegance Style model is out of the mold in the Leisure Pools manufacturing facility.

Gill said the isopolyester resin has a high heat distortion temperature and flexural and tensile properties. While many composite pool laminates achieve a respectable 12,000 (82.7 MPa) psi tensile strength, laboratory tests demonstrate that Leisure Pools laminates have a tensile strength of 21,000 psi (144.8 MPa).

According to Gill, “The AOC isopolyester provides a great combination of high strength, dimensional stability and flexibility. As a result, our pools withstand the rigors of shipping then resist any effects from ground movement once they are installed.” “Every shipment from AOC brings resin of the highest quality and consistency,” Gill continued. “We have never had to send resin back. Our AOC sales representative Eric Stuck is very responsive and helpful. We want our pools to last fifty years. That’s why we choose only the best materials such as the AOC resin system.”

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About Leisure Pools

After more than 20 years of making pools in Australia, Leisure Pools started importing pools for the North American market in 2003. In 2004, the company established headquarters and a manufacturing site for Leisure Pools USA in San Antonio, TX. Leisure Pools has earned a reputation for excellence in design, high quality manufacturing, reliability and honesty. For more information, phone (210) 333-7477 or visit www.leisurepoolsusa.com.

About AOC

AOC is a leading global supplier of resins, gel coats, colorants, additives and synergistic material systems for composites and cast polymers. AOC resins are manufactured in ISO 9001:2000-certified facilities that use proprietary process control technology to ensure batch-to-batch consistency. AOC adheres to Six Sigma Lean principles for improved quality and efficiencies. For more information, contact Steve Martin by e-mailing SMartin@aoc-resins.com or phoning him at (901) 854-2847.

