

CaseHistory

Swimming Pools Are "Green" With EcoTek®



Alaglas pools made with EcoTek® resin carry the same 50-year structural warranty that has been offered on pools made with traditional resin.

Resins: EcoTek® H460-EKAG
Recycled Content
Unsaturated Polyester

Hydropel® Vinyl Ester
Barrier Coat

Composite Applications: Swimming Pools

Manufacturing Processes: Hand Lay-Up Spray-Up

Range of Pool Dimensions: 8 feet by 16 feet by up to 4 feet deep
2.4 by 4.8 by 1.2 meters) to
16 feet by 40 feet by up to 8 feet deep
(4.3 by 12.2 by 2.4 meters)

For more than 20 years, Alaglas Swimming Pools owners have enjoyed the high strength and low maintenance that the company inherently builds into its structures. With new EcoTek® "green" resin from AOC, Alaglas is now also the first composite pool manufacturer to assure customers that their pool was made with more environmentally friendly technology.

Alaglas started using EcoTek H460-EKAG polyester for the structural segment of its state-of-the-art composite pools. While most thermoset resins are produced solely from unsustainable petrochemical feedstocks, EcoTek H460-EKAG resin is 28 per cent derived from biologically renewable resources and/or recycled materials.

A pool made with EcoTek H460-EKAG resin earned the superior quality in an open molded part award in the 2010 ACE competition.

Swimming Pools Are “Green” With EcoTek® continued



The “Green” content pool earned a coveted quality award from the American Composites Manufacturing Association.

"This resin makes us a better environmental steward and enhances a pool's appeal to customers looking to make greener lifestyle decisions," said Monty Felix, CEO of Alaglas.

"The same manufacturing process techniques and equipment were used to seamlessly incorporate the new green resin into our material system," he continued. "We didn't have to change a thing. Resin conversion was a simple matter of moving our suction wand out of one drum and into another."

How Greenness is Achieved

The renewable content in EcoTek H460-EKAG comes from agricultural products such as corn and plant oils that are precursors to the building blocks of the polymeric backbone. Resins made with these building blocks provide green alternatives to resins produced from building blocks that are wholly derived from crude oil and natural gas.

The resin's recycled content comes from reclaimed polyethylene terephthalate (PET) that would otherwise be destined for a landfill and/or from reclaimed glycols that would require diversion into a chemical waste stream.

Mechanical properties of EcoTek H460-EKAG are equal to or better than those of a conventional resin designed for open-molded products such as swimming pools. As a result, Alaglas pools made with green resin technology are durable enough to be sold with the same 50-year structural warranty that has been offered with pools made with traditional resin.

Made with EcoTek®

Alaglas pool construction begins with a sprayed-on, moisture-resistant gel coat that is backed up with a layer of chopped glass fibers in a Hydropel® H010 vinyl ester. This elite marine grade resin from AOC forms a high performance barrier against moisture intrusion that can cause blisters on the gel coat surface.

After barrier coat application, EcoTek H460-EKAG resin is used to wet out the reinforcing glass fibers in three manufacturing steps that create an engineered structural laminate: 1) spray up of chopped glass fibers and resin, 2) lay up of resin-impregnated stitched fabric that combines biaxial woven fiberglass cloth with multidirectional strand mat, and 3) another sprayed-up layer of chopped fibers and resin.

"The special stitched mat gives us a higher glass-to-resin ratio," Felix stated. "The higher fiber content, the strength distribution of the fabric's fiber architecture, and the EcoTek resin's low air entrapment synergize to deliver high structural integrity. Our pools are so strong enough to meet some customers' preference for aboveground installation."

About Alaglas

Alaglas Swimming Pools opened its doors in St. Matthews, SC, USA, in 1987. Since then, the company has built thousands of swimming pools and has advanced its manufacturing process beyond industry standards. Alaglas pools are sold through an extensive dealer network throughout the Eastern U.S. For more information, phone (877) 655-7179 or go to www.alaglas.com.

About AOC

AOC is a major global supplier of resins, gel coats, colorants and synergistic systems for composites and cast polymers. With EcoTek™ technologies, AOC is leading the development of green materials for producing composites that are friendlier to the environment. AOC knows technology, lives quality and delivers service better than any other supplier. To discover more about EcoTek technologies, go to www.green-resins.com.

