Crafted in Sweden, the Candela 7 is a stylish 7.7m open motorboat that combines carbon fibre construction and hydrofoils to create a near silent 100% electric craft with a range of 50 nautical miles (at 25 knots) on a single charge. Absolute focus on weight reduction is the key to this game changing performance. With a wet weight of only 1300kg the Candela is around 45-50% lighter than a traditional glass fibre fossil fuel powered boat.

Composite engineering work by Candela’s design and engineering team, experts with backgrounds in aeronautics, composites, foiling yachts and automotive engineering, delivered a fully foiling carbon fibre hull and deck structure capable of supporting the 230kg battery pack whilst only weighing 240kg itself.

Sicomin joined the project at an early stage, working with Candela to supply high-performance epoxy laminating resins for the manufacture of the initial prototype vessels. With the ramp up of series production, the company has also been able to support Candela’s targets to industrialise the production process, providing materials and process support that are then validated with extensive on the water testing.

CASE STUDY

SICOMIN EPOXY RESINS AND ADHESIVES – POWERING QUIET AND CLEAN FLIGHT AT CANDELA BOATS

Sicomin, the leading formulator and supplier of epoxy resin systems and high-performance composite solutions is proud to announce the qualification of its epoxy infusion resins and adhesive products for the series production of Candela’s groundbreaking new all electric foiling boat.

By switching the epoxy system for the hull and deck to Sicomin’s SR1710 infusion product, Candela now benefit from a cleaner and more consistent process technology whilst also producing laminates with extremely high mechanical properties and an impressive Tg of 100°C after post cure. SR1710 has also been shown to deliver excellent performance in hot and wet conditions, critical for Candela in such a highly loaded foiling craft.

Bonding of the Candela 7’s internal structures and final assembly of the finished craft has been designed around Sicomin’s flagship epoxy adhesive, Isobond SR7100TH. Formulated for both thick and thin bond lines, SR7100TH comes with several different hardener speeds and provides a user-friendly bonding solution that is particularly resistant to micro-cracking in long term fatigue testing.

In common with other key marine sector focused products in the Sicomin range, both SR1710 and Isobond SR7100TH carry DNV-GL Type Approval.
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“Working with so many complex materials and products to assemble the Candela 7, it is vital that we partner with the best suppliers” commented Teodor Hällestrand, Product Manager, Candela. “Sicomin, with their DNV-GL approved products and fantastic technical support are the perfect fit for an innovative and evolving company like us.”

Now in series production, with 5 boats already delivered in Europe, Candela’s stunning new boat can be seen, and test driven at various locations across Europe over the next few months.

Sicomin resins and adhesives will be onboard as Candela continues to pioneer the future of boating with quiet, clean flight above the waves.