



Rua da Fontinha, nº 885 | 4415 - 592 Crestuma - Porto | Portugal Tel. 227 639 176 | Fax. 227 639 177 | Telm. 962 559 764 info@elio-kayaks.pt | www.elio-kayaks.com

ENIGMA - The New Kayak Polo

DESIGN

The New Polo kayak **ENIGMA** has the following new features:



Reduction volume due to a lower deck dimension, respectively in the back side, resulting a higher maneuverable kayak. This reduce the power needed to dive the back side kayak, which allows an athletic reduction in the energy required to turn, lift and spin the kayak.

Lightly planed hull, give more slicing ability and turns the kayak much faster, nervous and reactiv.

PRODUCTION

The new Polo Kayak **ENIGMA** is currently manufacture with Vectran® fibers. These fibers are noted for superior properties in comparisson to Kevlar®, namely:

1. High modulus;
2. High strain;
3. High abrasion resistance;
4. High dimensional stability
5. High cut resistance
6. High superficial energy [this property gives an excellent adhesion to the polymeric reinforcing (matrix) forming a very cohesion composite layer unbelievably resistant].



ABOUT VECTRAN®

Vectran is a polyester based liquid crystal fiber manufactured by Hoechst. The molecular chains of the polymeric crystal liquid as the polyester present a natural propensity for the molecular alignment. Although the Vectran presents a modulus very similar to the Kevlar is thanks to this alignment that Vectran presents better flex and abrasion resistance. Table below show some properties values comparison.



PROPERTY	VECTRAN	KEVLAR
Modulus	56.5 Gpa	64.7 Gpa
Resistance to Flex	Good	Poor
Coating Adhesion	Excellent	Good
Abrasion Resistance	Good	Poor