

The StandUp® by LOEVA and Altuglas ShieldUp®: crystalline transparency

Among the superyachts at the 28th Monaco Yacht Show in Monte-Carlo this 25-28 September, Bayonne-based LOEVA will present a perfectly transparent stand-up paddle. This SUP allows paddlers to glide over the surface of the waves while admiring the underwater universe by day or by night. The board is a world first to be made with Altuglas® ShieldUp, a nano-structured acrylic glass developed by Arkema. Incubation by the Arkema R&D Centre in Lacq also helped the LOEVA startup to perfect this stand-up paddle. Combining state-of-the-art technology, avant-garde design and high-grade manufacturing, it transcends the boarding experience.

"From the beginning of the LOEVA project four years ago, we envisioned creating a technological breakthrough capable of providing a new experience," says LOEVA Co-Founder Laurent Jaurey. *"Nobody had managed to manufacture such a transparent paddle board before. It's the fusion of an idea and a pioneering material."* The result makes the StandUp® by LOEVA unique.



An innovative idea meets a high-performance material

This new-generation material is Altuglas® ShieldUp, a PMMA (polymethyl methacrylate) developed by Arkema and its subsidiary Altuglas International. *"They have succeeded in inventing a colorless acrylic glass almost as transparent as crystal,"* Laurent Jaurey enthuses. *"Unlike other polymers, Altuglas® ShieldUp provides an unparalleled balance in terms of resistance to shocks, scratches and cleaning products,"* states Jean-Marc Boutillier, Altuglas® R&D Engineer. The co-founder of LOEVA gives an extraordinary demonstration by hitting an Altuglas® ShieldUp sheet with a hammer, before heating the point of impact whitened by the violent knock. *"As you can see, the mark fades until it disappears. The material has a property memory that allows it to regain its transparency."*

The Arkema R&D Centre in Lacq: incubator for the StandUp® by LOEVA

"We started off carrying out sourcing in our region to try to identify the ideal material. The Arkema R&D Centre was an obvious choice because it's the very best when it comes to applied research on polymers. When they first saw us, they thought we were a group of kind of alternative surfers," Vanessa Pretotto, LOEVA Co-Founder, recalls with amusement. *"Then they fell in love with our concept."*

The Arkema research team offered to become our incubator, enabling us to test the exceptional Altuglas® ShieldUp material and put it to use. Our collaboration turned into an extremely rich exchange through which we have evolved together." The partnership expanded into assembly solutions with Bostik AEC Polymers (another Arkema entity based in the Nouvelle-Aquitaine region of France), which is very familiar with the maritime sector, having worked closely with Médoc-born skipper Lalou Roucayrol and his Multi50 Arkema.

Tested under the watchful eyes of sharks

Tests were carried out in the tanks of Biarritz aquarium, which is home to a number of sharks. "Once on the water, the board lets you see directly past the waves and ripples," says Laurent Jaurey. "There are no optical distortions like you might get when a dive mask fogs up. The view is clearer than aquarium glass, whatever the volume of water underneath. Perched on top of this panoramic screen of nearly 3 m², you feel kind of light-headed looking down at the bottom. It's quite something! The sensations go beyond what we ever anticipated. It's like walking on water. And there is the unexpected sight of the fish who come to look at you. In Biarritz aquarium, the sharks swam under the board and turned around to have a look! They could see us just as clearly as we could see them." An integrated lighting system makes it possible to see the seabed even at night. The waterproof electronics box under the deck houses two LED strips, which last for three hours after a full charge. They illuminate underwater up to a depth of 15 m, with a 70° dispersion angle. The ultra-white light augments the red end of the spectrum by 80%, reproducing the real colors under the water without frightening the fish.

An eco-friendly paddle

Aside from being powered solely by the paddler's energy, the StandUp® by LOEVA is manufactured using mainly Altuglas ShieldUp®, which is 100% recyclable. This is crucial in the context of the current environmental crisis. Keen to lead the way in this area, its designers have also come up with a new type of leash. Usually made of neoprene, in this case the ankle strap that attaches the surfer's foot to their board is manufactured to haute-couture standards using vegan leather made from apple skins. In keeping with this spirit of protecting their natural environment, the co-founders of LOEVA have chosen to donate a percentage of their sales to a non-profit organization that re-plants ocean coral. And best of all: the transparency of StandUp® by LOEVA allows paddlers to admire marine life while raising awareness of the need to preserve it.

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