

XECARB 6 C30, The World Champion of Composites



Technology applied to sport has taken yet another step forward. Vicenza based company Xenia has provided Atomic an exclusive material capable of improving the performance of the most famous and representative ski boot produced by the Austrian company. The backspin of the Redster WC Ski Boot, is made with a blend containing Xecarb 6 C30, a carbon based thermoplastic matrix composite created by Xenia in their plant in Mussolente.

Xenia engineers high performance polymeric materials for a range of diverse industrial applications. Atomic invited Xenia to collaborate in the production of their new Race Boot with the development of a stiffer backspine compared to the previous generation, making the product considerably more direct, stabile and responsive while reducing the weight. Xenia's laboratory produced a composite formed by a thermoplastic polyurethane and by a special carbon fibre of aeronautical derivation. The tests carried out by Atomic on the product have highlighted a rigidity six times superior to that of the previous one, with considerable improvement in ski control and speed.

Xecarb 6 C30 has an extraordinarily high shock resistance and wear and tear resistance even at very low temperatures (the tests were performed at -30°). Months of research and experiments have led to the achievement of a virtuous balance between rigidity and elastic properties.

Compared to other thermosetting materials, Xecarb 6 C30 requires a less complicated transformation process which is consequently also less expensive and produces a reduced environmental impact. Furthermore it has the advantage that it can be over-moulded through an injection molding process, to form a single body with the other component in virtue of a chemical bond.

Its main added value, however, is that it enables to obtain materials with mouldable physical-chemical characteristics. In other words, this is a perfectly customizable composite, depending in whether you want to enhance the properties of the polyurethane (elasticity and resistance in low temperatures) or those of the carbon (rigidity).

Xecarb 6 C30 is made with raw materials produced by Bayer, with which Xenia has launched a fruitful collaboration.

All the phases of the material development, from the formulation to the tests, have been carried out by Xenia staff in the laboratories in Mussolente.

Information on Xenia

Xenia is an Italian company, specialized in engineering and production of innovative polymer-based materials to be used for the most advanced and challenging industries.

The company is located in Vicenza, in the northeastern part of Italy, and it consists of an Engineering Dept., which supports customers for the development of new components, and by an R&D Dept., devoted to product innovation.

www.xeniamaterials.com



Information on Atomic Gmbh

ATOMIC manufactures products which are perfectly tailored for ski racers and freeskiers, cross-country skiers and backcountry skiers, beginners and World Champions alike. Every ATOMIC product is much more than the sum of its component parts, not only incorporating the know-how of creative experts, but also embodying the passion for skiing of each and every ATOMIC employee.

ATOMIC is based in Altenmarkt, in the heart of the Alps, where snow is always nearby - and where each new idea can be tested right there and then, 365 days a year. Thanks to a combination of experience, innovation and passion, ATOMIC has been synonymous with winter and skiing since the company was founded in 1955.

www.atomic.com