



PREMIERE AT JEC : XECARB® 17 C30, HIGHLY STIFF MATERIAL BASED ON PEBAX®

Xecarb® 17 C30 was born from Xenia's technology and Pebax® the thermoplastic elastomer from the global chemical company Arkema. Xecarb® 17 C30 is an innovative thermoplastic composite with a Pebax® base, reinforced with a carbon fiber frequently used in aeronautic field.

The goal was to take Pebax®, the best reference in the market, and make it stiffer. Pebax® is the thermoplastic polymer which is the reference material in the production of ski boots thanks to its special physical, mechanical and chemical properties. Pebax® is lightweight, durable and has an incredible elastic recovery always maintaining its mechanical characteristics even at very low temperatures. Cold temperatures, in fact, enhance its quality. These features have made it a reference material for the realization of high-performance components for winter sports.

The experience obtained in the implementation of these polymers has allowed the company in Mussolente to make Pebax® more rigid and to broaden the scope of its possible applications. The base material has been "loaded" with 30% carbon fiber in order to obtain the Xecarb® 17 C30 composite. It is fundamentally an evolution of Pebax® which adds to the virtues of the Arkema polymer also an adjustable rigidity.

The advantages are many. The carbon used with variable dosage allows you to create a material with adjustable stiffness but at the same time retains all the strength of Pebax®, overall at low temperatures. Based on its high mechanical characteristics, we can consider that Xecarb® 17 C30 introduces an elastic module up to 15 times more than Pebax®. This feature makes it possible to design parts with a considerably reduced thickness, an added advantage to the reduction to the weight of the product. On the whole, it also adds the possibility of overmoulded Xecarb® 17 C30 to other materials, therefore ensuring maximum freedom in terms of design.

About Xenia

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

The company, located in Vicenza, incorporates an engineering team, which helps customers to develop high-tech components with a research and development department dedicated to product innovation. www.xeniamaterials.com