

Pebax® resin – tougher and lighter with Xenia's carbon fiber technology

Arkema and Xenia have recently signed a cooperation agreement for the development of carbon fiber reinforced long chain polyamides, including the famous Pebax® thermoplastic elastomer. These compounds will find various applications in sports, optical, and electronics, where toughness and lightness are crucial.

Carbon fiber technology enhances the performance of polymers in the search for lightness and strength. This technology allows the production of ultra-thin and lightweight parts while keeping extremely high stiffness and impact resistance.



Xenia, an innovative and dynamic company based in Italy, has developed unique expertise in compounding carbon fibers with thermoplastic polymers that perfectly aligns with the development strategy of Arkema's Technical Polymers group.

In collaboration with Xenia, newly developed Pebax® grades will have higher rigidity while keeping the universally recognized features of Pebax® TPE. These include enduring elasticity and impact resistance even at extremely low temperature, and also outstanding processability through direct injection moulding.

"We will develop a new product portfolio with a focus on three markets. Sports, where we already have a dedicated brand to be recognized by athletes in Pebax® Powered, and the other two are Optical and Consumer Electronics. All three are extremely dynamic and fast markets where lightness is a major innovation trend and where Pebax® elastomers are the reference high performance TPE - says Fabien Debaud, Global R&D Director of the Specialty Polyamides unit of Arkema - Obviously in the future we will also apply this technology to our other high performance polymers such as Rilsan® [polyamide 11] and Rilsamid® [polyamide 12], leaders in the automotive and industrial markets".

"Xenia is very proud of this partnership with Arkema - adds Fabio Azzolin, CEO of Xenia – we will capitalise on the R&D experience of both companies. This is why, in agreement with Arkema, we will develop and market our own product portfolio based on Arkema's polymers in markets and applications where we are already active and introduced".





A designer of materials and innovative solutions, **Arkema** shapes materials and creates new uses that accelerate customer performance. Our balanced business portfolio spans high-performance materials, industrial specialties and coating solutions. Our globally recognized brands are ranked among the leaders in the markets we serve. Reporting annual sales of €7.7 billion in 2015, we employ approximately 19,000 people worldwide and operate in close to 50 countries. We are committed to active engagement with all our stakeholders. Our research centers in North America, France and Asia concentrate on bio-based products, new energies, solutions for electronics, potable water management, lightweight and 3D design materials, building performance and insulation.

More information: www.arkema.com or www.pebaxpowered.com

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

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

More information: www.xeniamaterials.com