

More wear comfort, less weight: Plasteel Eyewear made from Evonik's VESTAKEEP® PEEK

Together with Evonik, Mentor Optical Limited, an eyewear manufacturer based in Hong Kong, successfully developed its new brand model Plasteel using Evonik's high performance plastic VESTAKEEP® PEEK

Plasteel Eyewear

Innovation at Evonik with VESTAKEEP® PEEK supported the creation of the Plasteel Eyewear at Mentor Optical which is a lightweight & tough optical frame with a unique patented plastic rim lock design. The Eyewear weighs just 9 grams whereas traditional frames weigh as much as 23 grams, thereby offering the greatest wear comfortability. In addition, Plasteel frames' rim height can be designed to be as low as 1.6mm while the thickness at the temple can be as thin as 0.9mm. The frames are ultrastrong and can sustain a 360 bending test without breakage providing performance & protection against broken eyewear especially in sport activities. With a patented plastic rim lock design, the frames allow prescription lenses to be mounted easily and eliminate damages associated with traditional 'push through' method.

VESTAKEEP® for Plasteel

Plasteel inherits its excellent mechanical properties and performance from VESTAKEEP® Polyether ether ketone (PEEK) produced by Evonik Industries. VESTAKEEP® PEEK is a high-performance thermoplastic polymer ideal for producing reliable & long-lasting components for use in the toughest conditions. It is characterized by its superior resistance to stress cracking making it suitable for injection molding very thin components.

VESTAKEEP® PEEK has a high energy absorption and its ductile behavior can prevent any premature deformation and cracks in the frames. Furthermore, VESTAKEEP® PEEK has excellent biocompatibility and biostability due to the polymers' high chemical resistance and thermal stability.

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Collaboration for success

The success of Plasteel frames is the product of a collaboration between three companies: Evonik, Mentor Optical Limited and Ngai Hing Engineering Plastic (NHEP). Evonik provided the critical material & product know-how while NHEP being the strategic distribution partner supported by offering quick local support to Mentor Optical.



Plasteel Eyewear made from Evonik's VESTAKEEP® PEEK (Source: Mentor Optical Limited)

Company information

Evonik, the creative industrial group from Germany, is one of the world leaders in specialty chemicals. Profitable growth and a sustained increase in the value of the company form the heart of Evonik's corporate strategy. Its activities focus on the key megatrends health, nutrition, resource efficiency and globalization. Evonik benefits specifically from its innovative prowess and integrated technology platforms. Evonik is active in over 100 countries around the world. In fiscal 2015 more than 33,500 employees generated sales of around €13.5 billion and an operating profit (adjusted EBITDA) of about €2.47 billion.

Evonik Industries has been producing specialty chemical products in the Greater China region (Mainland China, Hong Kong and Taiwan) since the late 1970's; with wide-ranging trading relations already in place prior to this in the region. Evonik regards Greater China as one of the driving forces of the global economy and we consequently endeavor to grow our business in the region. The company now has around 3,000 employees in the Greater China region, the regional sales reached over €1.3 billion in 2015.

Press release



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