Ensinger GmbH . 71154 Nufringen

PRESS RELEASE

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High-strength components in TECATEC

Carbon fibre composites for use in medical technology

Ensinger recently launched a series of highly loaded thermoplastic carbon fibre composites. Components made of this composite material offer high mechanical strength alongside excellent heat distortion properties.

Stock shapes made using the new TECATEC product series comprise a thermoplastic matrix and a woven fabric of carbon fibre bundles. This combination ensures the achievement of significantly higher tensile and flexural strength compared to fibre reinforced extrudates. The lightweight materials also offer good chemical resistance and are radiolucent, making them ideally suited for external fixation devices and surgical instruments.

TECATEC PEEK CW50 makes use of the matrix polymer VICTREX® PEEK™, which is compressed with laminated woven carbon fabric mats. A special coating on the fabric helps to reduce the number of faults. A carbon fibre fabric component of 50 per cent ensures extremely good torsional stiffness and minimal tendency to warp even after multiple sterilization cycles. These attributes make for a long service life of components.

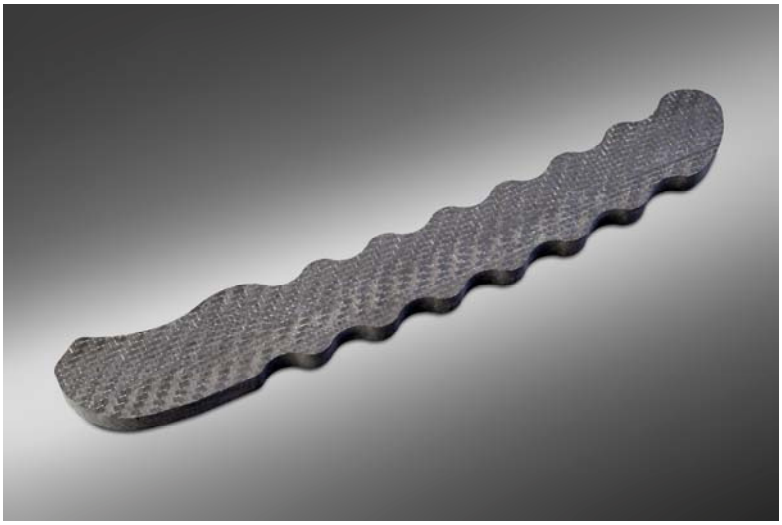
This new material is an example of close co-operation between the Ensinger Group and Victrex Polymer Solutions. The two companies have agreed to work closely together on the development and marketing of new application fields for PEEK™ products.

The other composite material offered within the Ensinger portfolio is **TECATEC PEKK CW60**. This comprises a polyetherketoneketone matrix (PEKK), laminated with a 60 per cent carbon fibre fabric. The proprietary manufacturing process used achieves excellent fibre and matrix integration. Because of its high glass transition point (165 °C), PEKK is resistant to repeated steam sterilization cycles, while its enhanced carbon fibre component ensures even higher dimensional stability and stiffness.

Medical technology is the single most important field of application for TECATEC products. Both materials are physiologically harmless (biocompatibility in accordance with ISO 10993-5) and corrosion resistant. In orthopaedic applications, radiolucent, low-warpage targeting fixtures made of carbon fibre composites are used for positioning fixing pins. The extreme strength of these composite materials also offers benefits when used in the manufacture of spreaders or in components for the external fixture of bone fractures.

TECATEC is available in plate thicknesses of 3 to 40 mm, with larger dimensions available on request.

(MEDTEC Europe, 22-24 March, Messe Stuttgart – Hall 4, Stand 337)



Caption:
Target device blank. Medical components made of carbon fibre filled TECATEC composite material combine strength with radiolucency.

The **Ensinger** group is engaged in the development, manufacture and sale of compounds, semi-finished materials, profiles and technical parts made of engineering and high performance plastics through extrusion, machining and injection moulding. With a total of 1,800 employees at 25 locations, the family-owned enterprise is represented worldwide in all major industrial regions with manufacturing facilities or sales offices.

About **Victrex**: Headquartered in the UK, Victrex plc is the world's leading manufacturer of high performance polyaryletherketone materials such as VICTREX® PEEK™ polymer, APTIV™ films and VICOTE® coatings. VICTREX® is a registered trademark of Victrex Manufacturing Limited in the US, European Community and elsewhere. PEEK™ and APTIV™ are trademarks of Victrex plc. VICOTE® is a registered trademark of Victrex plc in the US, European Community and elsewhere.

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