

TRIBO FORCE® PEEK

based on VESTAKEEP® PEEK polymers



PEEK high performance compounds: co-operation between EVONIK Industries and LEIS Polytechnik GmbH

Based on high performance polymer VESTAKEEP® PEEK (www.vestakeep.com) from EVONIK Industries, LEIS Polytechnik polymere Werkstoffe GmbH has developed a new PEEK compound for tribological applications. As of now, the two companies will distribute the material worldwide under the brand name TRIBOFORCE® PEEK C2301.

Under the same test conditions, TRIBOFORCE® PEEK C2301 has around 50% lower wear than other tribologically optimised PEEK types. The coefficient of friction is also outstanding, having been determined at 0.18 in the “block on ring” process (test conditions $p=5$ MPa; $v=1$ m/s; dry around 100 Cr6). No other PEEK compound examined in this test achieved a coefficient of friction below 0.3.

Due to its outstanding tribological and mechanical properties, the new, high performance material is suitable for applications with extreme loads and temperatures up to 260 °C. Among other things, the low coefficient of friction allows huge energy savings, e.g. in electromechanical drives.

The more viscous type TRIBOFORCE® PEEK C2300 has been developed especially for extrusion, although the mechanical and tribological attributes are identical to those of the injection moulding types.

LEIS Polytechnik (www.leis-polytechnik.de) specialises in the development and production of high performance polymers and has exclusive know-how in the areas of metal substitution (*NYLAFORCE®* product group) and tribologically optimised plastics (TRIBOFORCE® product group).

The co-operation and the marketing of TRIBOFORCE® PEEK C2301 are a further important step for both companies in the systematic expansion of the product portfolio and market segment in the area of high performance polymers.