Press release

Molded parts made from VESTAKEEP® PEEK and VESTAMID® HT*plus* shine through induction technology

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High surface quality and resistance to mechanical stress are requirements that polymer moldings must fulfill—despite increasing functional integration in components and the resulting increase in complexity of component geometry. An innovative induction heating technology from RocTool improves component quality by ensuring a high mold temperature during the injection phase and high cooling rates during the holding-pressure and cooling phases in the injection molding process. In combination with VESTAKEEP® PEEK and VESTAMID® HT*plus* high-performance polymers, this improves particularly the gloss level of molded parts.

This highly dynamic temperature control selectively influences the formation of the morphology and surface structure. While the gloss levels achieved for the high-performance thermoplastics investigated lie in the range for high-gloss surfaces, the mechanical properties in the tensile test remain almost unchanged as the mold temperature is varied.

Moreover, the wear rate of VESTAKEEP® molded parts, as measured on a pin-disk test rig, is reduced when mold temperatures are sufficiently high. This could, for example, increase the operating life of gears.

VESTAKEEP® PEEK polymers are distinguished by high mechanical strength as well as good electrical insulation and chemical resistance. The polyphthalamide (PPA) VESTAMID® HT*plus* is known for its high heat resistance and excellent mechanical properties. VESTAMID® HT*plus* is used as a metal substitute and for fire protection, among other applications.

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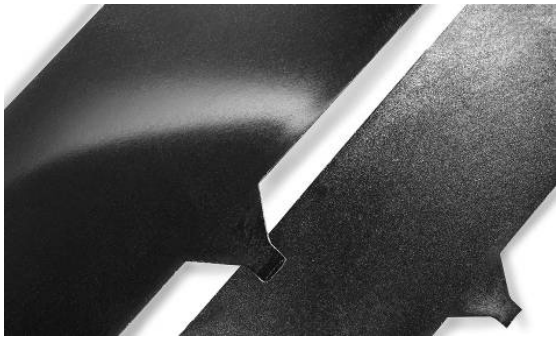

Figure caption

Matt or glossy: VESTAKEEP® PEEK molded parts have a wide range of gloss levels. The part on the left was produced at a mold temperature of 250°C, and that on the right at 180°C.

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