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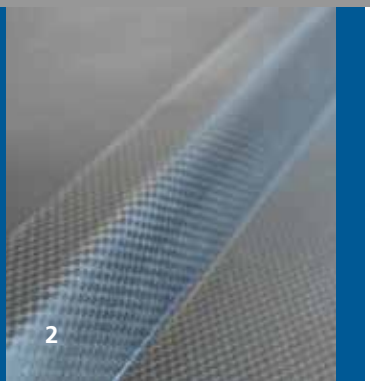

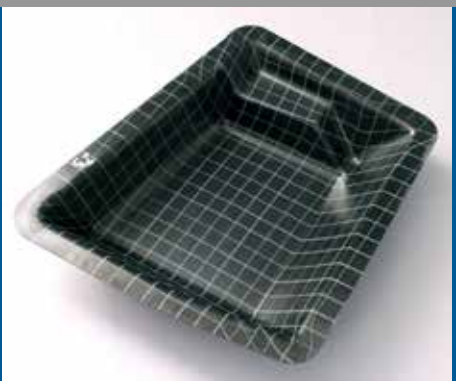


1 *Hybrid reinforcement structure based on polyetherimide (PEI/CF-GF).*
2 *Stringer profile based on polyetheretherketone (PEEK/CF).*
3 *Complex tape draping geometry based on polyphenylene sulfide (PPS/CF).*
4 *Injection molding production unit for the hybrid molding process – suitable for high-temperature thermoplastics.*

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HIGH-TEMPERATURE THERMOPLASTICS
WHEN THE DEMANDS ON A SYSTEM INCREASE

Monolithic and hybrid fiber composite structures based on thermoplastics play an increasingly important role in modern lightweight applications. Materials used in the automotive sector and in aviation generally have to meet particular requirements. Often the specific properties needed can only be obtained using high-temperature (high-performance) thermoplastics such as polyetheretherketone (PEEK), polyetherimide (PEI), polyphenylene sulfide (PPS) or polyphthalamide (PPA). The processing of these materials requires process technology that is tailored to the requirements. This technology is available at Fraunhofer ICT. Together with an experienced scientific team focused in particular on material and process development, we support our customers at every stage toward achieving a finished product.

Process technologies available for high-temperature thermoplastics

- tape laying
- consolidation
- forming technology
- back-injection and back-molding
- in-mold shaping
- foam injection molding
- metal-plastic hybrid technology