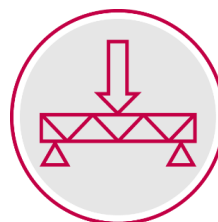


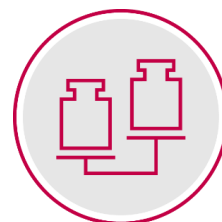


LUVOCOM® XCF – Carbon Fiber Compounds Unmatched in terms of mechanical values

- Tensile strengths of up to 425 MPa
- Tensile moduli of up to 52 Gpa
- Reduction of weight of up to 68 %
- Reduction of system costs of up to 70 %
- Made-to-measure solutions



STRUCTURAL



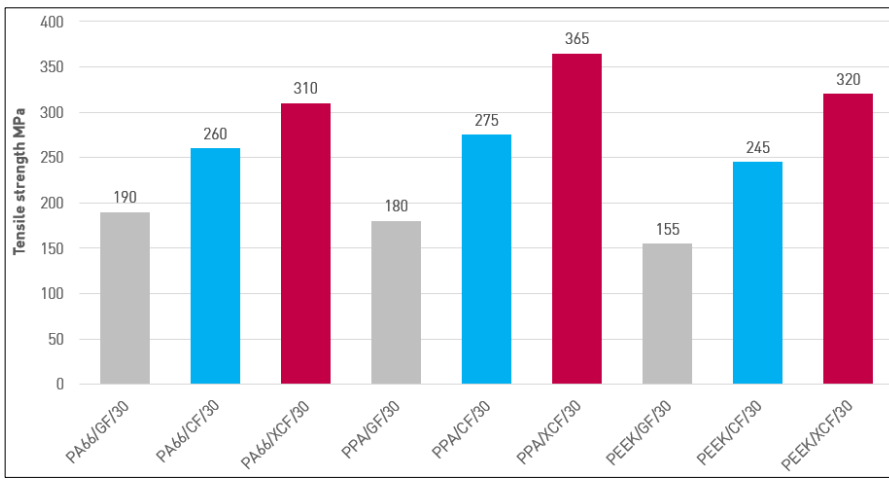
WEIGHT

With the LUVOCOM XCF product line, LEHVOSS offers the world's leading thermoplastic carbon fiber compounds. XCF stands for LEHVOSS' own **extra carbon fiber** technology. LUVOCOM XCF offers tensile strengths of up to 425 MPa, tensile modulus of elasticity of up to 52 GPa with high impact strength at the same time. The materials also have low thermal expansion, improved thermal conductivity and high dimensional stability. As a result, it provides even greater scope for replacing metals and composite materials (CFRP and GFRP). LUVOCOM® XCF compounds are used for components subject to high mechanical requirements. The motivation for this is the reduction in weight and costs.

Another approach is to substitute plastics with short and long glass-fiber reinforcement in applications where additional weight savings are required. Examples of such applications are lifts with high-performance motors or electric drive systems. Additional weight savings of up to 30% are possible with LUVOCOM® XCF compounds. Lower filler levels mean better processing characteristics and hence greater freedom in design. The materials can be processed in conventional injection molding procedures without the need for special machines or techniques.

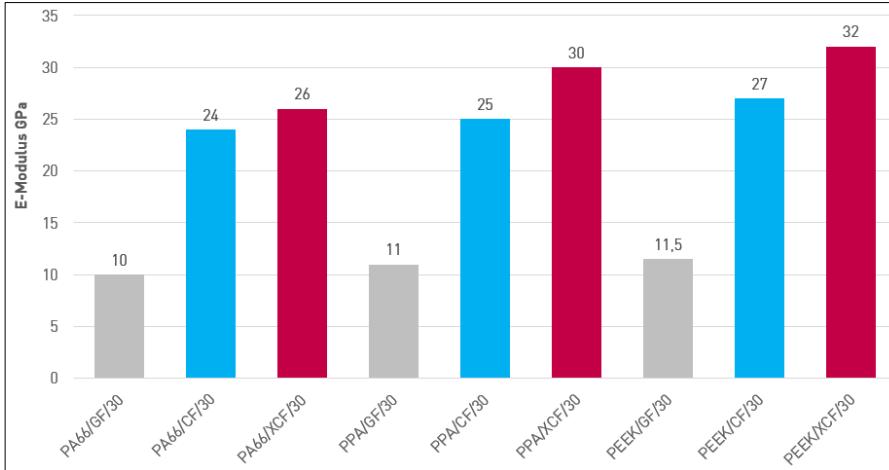
Typical applications for carbon-fiber reinforced compounds are fast-moving components in the construction of machinery and apparatus – for example thread carriers, pump impellers, gear wheels, cams and connecting rods. In the automotive sector, these materials are used in air and exhaust management, in vacuum pumps, steering units as well as in the drive train. In aviation, the low weight and the stiffness of carbon-fiber reinforced compounds open up countless opportunities in lightweight construction – examples include use for luggage racks and structural elements. In the sports and leisure sector, LUVOCOM XCF enables top performance by saving weight by substituting metals. Application examples are ski bindings and roller skis.





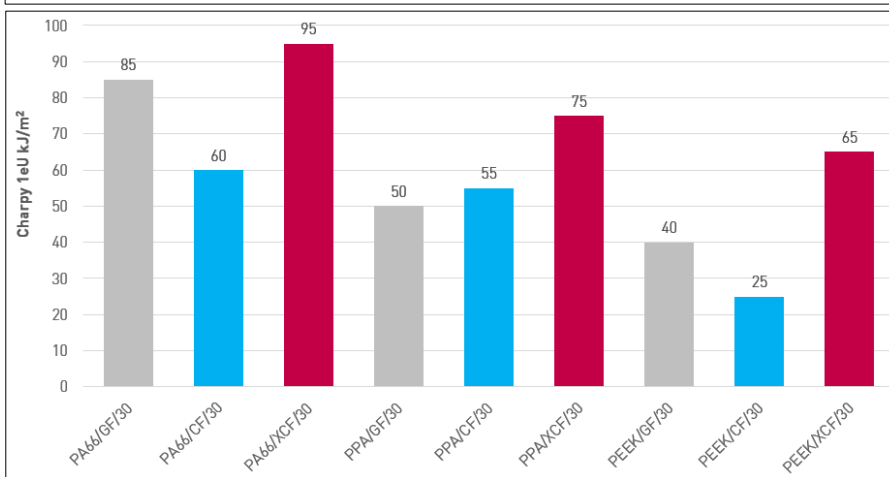
Tensile strength comparison of glass and carbon fiber reinforced polymers.

LUVOCOM XCF up to 100 % stronger than GF compounds
33 % stronger than classic CF compounds



E-modulus comparison of glass and carbon fiber reinforced polymers.

LUVOCOM XCF up to 178 % stiffer than GF compounds
20 % stiffer than classic CF compounds



Impact strength comparison of glass and carbon fiber reinforced polymers.

LUVOCOM XCF up to 60 % tougher than GF compounds
160 % tougher than classic CF compounds

Our Material Competences



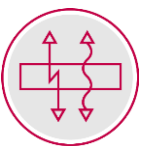
STRUCTURAL



RESISTANT



TRIBOLOGICAL



CONDUCTIVE



WEIGHT



PROTECTION



SURFACE



CUSTOMIZED
POLYMER MATERIALS

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