

ANISOPRINT REINFORCING MATERIALS: Composite Carbon Fiber (CCF) AND Composite Basalt Fiber (CBF)

Reinforcing materials are made by patented technology: continuous fibers (carbon or basalt) are preliminarily impregnated with the special polymer mix. They're called Composite Fibers, because these reinforcing materials are already composites with continuous fibers themselves. Pre-impregnation will give good adhesion of reinforcing material to thermoplastic during the printing process.

ANISOPRINT COMPOSITE

- Up to 30 times stiffer and stronger than pure plastic
- Strength- and stiffness-to-weight ratio is up to 5 times higher than for 2024-T351 Aluminum
- Up to 7 times lighter than steel and strong as stainless steel

CCF-1.5K CARBON COMPOSITE FIBER PROPERTIES

Effective Diameter, mm	VF, %	Elastic Modulus, GPa	Tensile Strength, MPa
0.35	60	149	2206

PLASTIC REINFORCED WITH ANISOPRINT REINFORCING MATERIALS

Parameter	PETG + CCF-1.5K	PETG + CBF
Density, g/cm ³	1.4	1.7
Tensile modulus in fiber direction, GPa	64	22
Poisson ratio ²¹	0.36	0.34
Tensile ultimate stress in fiber direction, MPa	860	600
Tensile elongation in fiber direction, %	1.3	2.8
Compressive modulus in fiber direction, GPa	—	20
Compressive ultimate stress in fiber direction, MPa	290	195
Compressive elongation in fiber direction, %	—	1.2
Flexural Strength, MPa	520	—

NOTE:

The test data was obtained applying standard and nonstandard specific test methods. All the test results are preliminary but not final and should be considered as reference. The data cannot be used for design and analysis of certain parts. Anisoprint provides no warranties on the use of this data.