

ABS CF

Carbon Fiber ABS

Our carbon fiber ABS is a composite material that offers the stability and strength of ABS, but with added lightweight strength and a lower tendency to warp. The material is highly printable with finished parts that are rugged, yet refined — and the material offers the same post-processing options as regular ABS. Whether you need to fully customize the appearance of your print or desire a shinier finish, ABS CF can be sanded, primed, painted or finished with an acetone vapor treatment. While ABS CF responds beautifully to post-processing techniques, its unique appearance looks beautiful on its own. The carbon fiber ABS filament prints in a deep shade of graphite with an exceptionally even, semimatte finish.

Mechanical Properties	Standard	Value	Unit
Ultimate Tensile Strength	ISO 527	46	MPa
Tensile Modulus	ISO 527	5210	MPa
Elongation at Break	ISO 527	2	%
Flexural Strength	ISO 178	76	MPa
Flexural Modulus	ISO 178	5260	MPa
Hardness Shore	Standard	Value	Unit
Hardness			

Thermal Properties	Standard	Value	Unit
HDT @ 0.45 MPa	ISO 75	76	°C
Glass Transition Temp	DSC	105	°C
Physical Properties	Standard	Value	Unit
Density	ISO 1183	1.11	g/cm ³
Certifications and Tests	Standard	Value	Unit
Flammability (UL 94)			
USP Class VI Certified			

Characteristics

- High stiffness
- High tensile strength
- High heat tolerance
- High chemical resistance
- Low weight
- Low thermal expansion
- Parts can be smoothed with acetone vapors
- Higher melting point than PLA or PETG

Applications

- Ideal for any applications which require light weight and rigidity.
- Carbon fiber reinforced parts, designed to use less material and save weight, is extremely popular in aerospace, civil engineering, the military, and motorsports.

Considerations

- We currently recommend a hardened steel nozzle with a minimum diameter of 0.4mm.
- Ideal layer height is 60% of nozzle diameter. We do not recommend printing layers smaller than 0.2mm with carbon fiber reinforced filaments.

Printing Skill & Experience: Beginner Intermediate Advanced Expert

- Use enclosed chamber to avoid part warp.
- Dry material before printing.
- ABS fumes are harmful, always ensure the HEPA filter is ON.

Printer Compatibility

<input type="checkbox"/> 3ntr A2v4	<input type="checkbox"/> 3ntr A4v4	<input checked="" type="checkbox"/> EVO-T	<input checked="" type="checkbox"/> EVO22-T
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Available colors from [Airwolf 3D](#): Black