

Property	Specification / Description	Standard / Notes
Product Name	Glossy/Matte Carbon Fiber Sheet	Surface finish options: High Gloss, Matte, or Semi-Matte
Surface Finish	Glossy: Mirror finish; Matte: Anti-reflective textured surface	One-sided or double-sided finish available
Fiber Type	3K Carbon Fiber (Other: 1K, 6K, 12K optional)	Toray / Mitsubishi / Tairafil Fiber brands
Weave Style	2x2 Twill Weave (standard), Plain Weave optional	For both structural and aesthetic applications
Resin Type	Epoxy Resin (High Tg)	UV-resistant, high adhesion, thermal stability
Manufacturing Method	Compression Molding / Vacuum Infusion / Autoclave	Uniform surface and thickness control
Standard Thickness	0.3 mm - 10 mm	Most popular: 0.5 mm, 1 mm, 2 mm, 3 mm, 5 mm
Standard Sizes	200x300 mm, 400x500 mm, 500x1000 mm, 1000x1000 mm, 1000x2000 mm	Custom sizes and shapes available upon request
Fiber Volume Content	$\geq 60\%$	ASTM D3171 compliant
Tensile Strength	≥ 600 MPa	ASTM D3039
Tensile Modulus	≥ 60 GPa	ASTM D3039
Flexural Strength	≥ 500 MPa	ASTM D790
Flexural Modulus	≥ 50 GPa	ASTM D790
Density	~ 1.55 g/cm ³	Lightweight and high stiffness
Glass Transition Temperature (Tg)	$\geq 120^{\circ}$ C	Up to 180° C with high-Tg epoxy options
Thermal Expansion Coefficient	-0.5×10^{-6} / $^{\circ}$ C (in-plane)	Near-zero expansion; dimensional stability
Water Absorption	$\leq 0.2\%$ (24 hr at 23° C)	ASTM D570
Electrical Conductivity	High in-plane / Insulating through thickness	EMI/RF shielding capabilities
Machining Compatibility	Suitable for CNC, laser cutting, waterjet, drilling	Proper ventilation & dust control required
Adhesive Compatibility	Compatible with epoxy, acrylic, and cyanoacrylate adhesives	Surface prep recommended before bonding
Protective Film	PE film on surface (optional)	Prevents scratches during shipping and processing
Edge Options	Raw cut / CNC chamfered / Rounded	Custom machining services available
Thickness Tolerance	± 0.1 mm	Custom tighter tolerances available
Certifications	ISO 9001 / RoHS / REACH / MSDS / SGS	Industry-standard documentation available

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Applications	Drones, Robotics, Auto Parts, Aerospace Components, Industrial Covers, DIY Projects	Also for high-end decoration or enclosures