

Property	Specification / Typical Value	Standards / Notes
Product Name	Kevlar® Round Tube	Also known as Aramid Fiber Tube
Reinforcement Material	Kevlar® 29 / Kevlar® 49 (Aramid Fiber)	By DuPont or equivalent grade
Matrix Resin	Epoxy / Vinyl Ester / Phenolic Resin	Heat-cured for enhanced durability
Outer Diameter (OD)	6 mm - 100 mm	Custom sizes available
Wall Thickness	0.5 mm - 5 mm	Uniform wall or variable thickness upon request
Length	500 mm - 3000 mm (standard)Max: 6000 mm	Precision-cut available
Weave Types	Plain / Twill / Unidirectional (UD)	Hybrid weaves possible (e.g. Carbon-Kevlar mix)
Surface Finish	Natural Yellow / Matte / Clear-Coated / Painted	UV-resistant coating optional
Density	1.4 g/cm ³ - 1.5 g/cm ³	~20 - 30% lighter than aluminum
Tensile Strength	≥350 MPa	ASTM D3039
Tensile Modulus	≥30 GPa	ASTM D3039
Flexural Strength	≥400 MPa	ASTM D790
Compressive Strength	≥250 MPa	ASTM D695
Impact Resistance	Excellent	Kevlar known for high toughness
Thermal Resistance	-40 ° C to +160 ° C	Short-term up to 200 ° C
Flammability	Low / Self-extinguishing	UL 94 V-0 equivalent (optional)
Corrosion Resistance	Excellent (chemicals, moisture, salt spray)	Suitable for marine and harsh environments
Electrical Properties	Non-conductive	Ideal for electrical insulation applications
Machinability	Good with diamond tools	Ends can be drilled, milled, or bonded
Tolerance	±0.1 mm OD / ±0.05 mm thickness	Tight tolerance optional
Customization	Length, OD, wall thickness, weave, hybrid layups	OEM / ODM supported
Certifications	ISO 9001 / RoHS / REACH / MSDS / ASTM Compliance	3rd-party testing on request
Typical Applications	Defense gear, aerospace insulation, RC parts, archery arrows, sports shafts	When high strength + low weight + electrical insulation are needed