PA6-CF HS

WJ PA6-CF HS is a carbon-fibre reinforced PA6 filament. Review its grade-specific reference properties, printing parameters and handling guidance.

WJ-TDS-PA6-CF-HS-001 | V1.0 | 2026-10-20 | EN

Physical & thermal properties

Property	Test method	Unit	Typical value
Density	ISO 1183	g/cm³	1.19
Light transmission	N/A	-	N/A
Flame retardancy	N/A	-	N/A
Melting temperature	ISO 11357	°C	260
Heat deflection temperature (0.45 MPa)	ISO 75-2	°C	160
Vicat softening temperature (A50)	ISO 75-2	°C	N/A

Mechanical properties

Property	Test method	Unit	Typical value
Tensile strength (X-Y)	ISO 527	MPa	75
Tensile strength (Z)	ISO 527	MPa	42
Elongation at break (X-Y)	ISO 527	%	7
Elongation at break (Z)	ISO 527	%	2
Bending strength (X-Y)	ISO 178	MPa	122
Bending strength (Z)	ISO 178	MPa	83
Bending modulus (X-Y)	ISO 178	MPa	4650
Bending modulus (Z)	ISO 178	MPa	2400
Charpy impact strength (X-Y)	ISO 179	KJ/m²	38
Charpy impact strength (Z)	ISO 179	KJ/m²	16

This technical data sheet provides typical reference values for material comparison and selection only. It is not an independent third-party test report and does not constitute a product specification, warranty or guarantee of performance. Test methods and specimen conditions are stated in the corresponding sections. The user must verify suitability for the intended application.

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Recommended printing parameters

Parameter	Unit	Value
Nozzle temperature	°C	275
Bed temperature	°C	100
Build surface material	-	PEI film, PI film
Cooling fan	-	OFF
Printing speed	mm/s	120-150
Environmental temperature	°C	40-60
Annealing (after printing)	°C	100-120
Annealing time	-	Not specified in the supplied reference sheet.

Recommended parameters are based on Bambu Studio with a 0.4 mm nozzle. Printing conditions may differ with other nozzle diameters.

Storage & handling

Topic	Guidance
Nozzle wear	Use a wear-resistant nozzle, such as hardened steel or ruby. Brass nozzles are susceptible to wear.
Drying and moisture	Dry before printing. Store and print in dry conditions below 20% relative humidity. Drying temperature and duration are not specified in the supplied reference sheet.
Self-support removal	When using this filament as its own support material, remove supports before excessive moisture uptake; otherwise supports may bond permanently to the model.
Annealing	After printing, anneal the part at 100-120 °C to improve overall strength. Annealing duration is not specified in the supplied reference sheet.

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Data source & conditions

Topic	Data source & test conditions
Data status	Typical reference values; not independently re-tested by WJ on this batch.
Reference revision	LW-TDS-A01; WJ edition V1.0.
Printing conditions	Recommended parameters are based on Bambu Studio with a 0.4 mm nozzle. Printing conditions may differ with other nozzle diameters.
Unspecified conditions	Specimen conditioning, infill, perimeter count, drying schedule and annealing duration are not specified in the supplied reference sheet.
Orientation labels	X-Y and Z labels are retained from the supplied reference sheet. Detailed specimen preparation is not specified.

Disclaimer & data status

Typical values are for reference and comparison only, not for design specifications or quality control. Actual properties depend on part design, environment, printing conditions and post-processing. Specifications may change without notice. The user must assess safety, compliance, technical suitability and end-of-life disposal or recycling for the intended application. WJ makes no warranty of suitability and accepts no liability for damage, injury or loss arising from use.

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Carbon-fibre reinforced PA6. Fibre content is not specified in the supplied reference sheet.

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