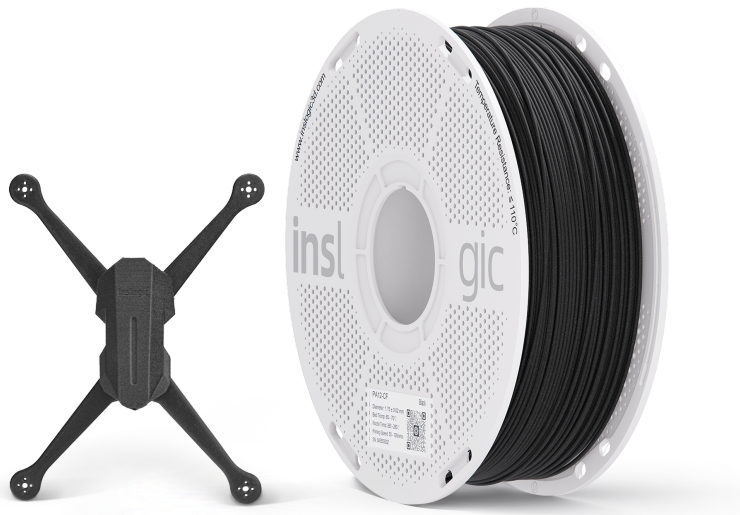


TECHNICAL DATA SHEET Inslogic PA12-CF Filament



Inslogic Industrial PA12-CF is an advanced carbon fiber-reinforced material that offers exceptional strength, reduced weight, and low moisture sensitivity, with thermal resistance up to 176°C. It is ideal for manufacturing, automotive, and aerospace applications that demand stiffness, impact resistance, and a high strength-to-weight ratio.

Key Features

- Stiff and strong
- Heat, wear & chemical resistant
- Low moisture sensitivity
- High strength-to-weight ratio
- Superior interlayer bonding strength

Applications

- Manufacturing
- Automotive
- Aerospace
- Jigs & Fixtures
- End-use products
- Prototypes: car parts, drones, mechanical components



Specifications

Material Name	Inslogic PA12-CF
Diameter	1.75 ± 0.03 mm
Net Filament Weight	1 kg

Recommended Print Settings

Drying Settings	90 °C for 12h; 110 °C for 4h
Nozzle Size	0.4, 0.6 mm
Nozzle Temperature & Printing Speed	260-280 °C at 50-100 mm/s
Bed Temperature	60 - 70 °C
Cooling Fan Speed	70%
Bed Type	Textured PEI Sheet

Physical Properties

Property	Method	Metric
Density	ISO 1183	1.0466 g/cm ³
Melting Temperature, 10 °C/min	ISO 11375-3	226 °C
Glass Transition Temperature, 10 °C/min	ISO 11375-3	99 °C
Heat Deflection Temperature at 0.45 MPa	ISO 75	177 °C



Mechanical Properties

Property	Method	Metric
Tensile Strength	ISO 527/2	103 MPa
Elongation at Break	ISO 527/2	12.8%
Flexural Strength	ISO 178	162 MPa
Flexural Modulus	ISO 178	5468 MPa
Izod Impact, Notched	ISO 180	13.2 KJ/m ²



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