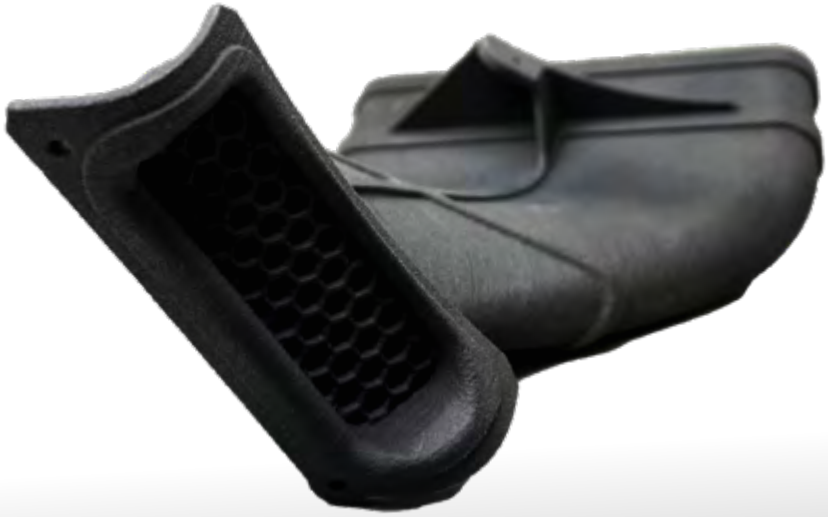


DuraForm PA CF

Rigid – Filled Material

Produce strong, high-performance parts that deliver heat resistance and high stiffness at lower weights.

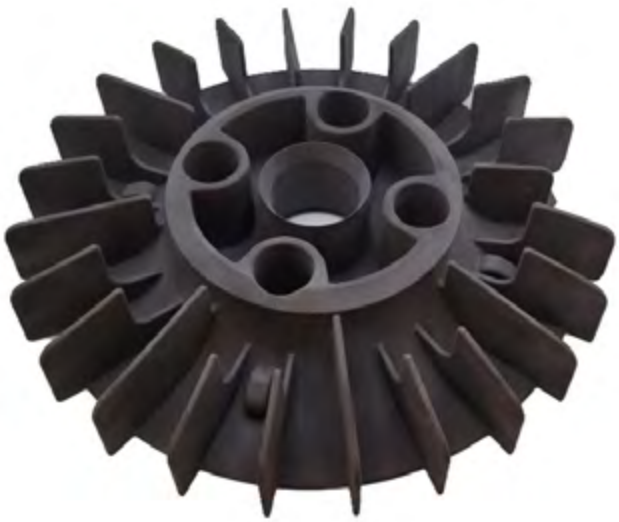
Selective Laser Sintering (SLS)

HIGH PERFORAMANCE AND TEMPERATURE RESISTANT, CARBON FILLED NYLON

DuraForm PA CF is 33% carbon fiber filled nylon 12 that increases the stiffness of the material while decreasing weight.

It possesses high heat deflection temperatures and resists warping making it an excellent choice for high performance and elevated temperature applications. DuraForm PA CF enables the direct production of parts with advanced stiffness and making it possible to avoid multi-stage, long production processes. The long-term stability of DuraForm PA CF delivers economies through strength and durability, removing the need for replacement costs.

As a production-grade material, DuraForm PA CF can be utilized for functional prototypes or end-use parts.



APPLICATIONS

- Wind tunnel model testing
- High performance motorsports parts
- Small format, short run tools, jigs, and fixtures
- High impact sports equipment
- High heat and/or high impact industrial applications

BENEFITS

- High stiffness, low weight
- High heat resistance
- Direct production of parts with advanced high stiffness
- Resists warping at high temperatures
- Production-grade, suitable for functional prototypes or end-use parts

3D SYSTEMS

DuraForm PA CF

SOLID MATERIAL			
METRIC	ASTM METHOD	METRIC	US
PHYSICAL			
Solid Density	ASTM D792	1.11 g/cm³	0.04 lb/in³
24 Hour water absorption	ASTM D570	0.47 %	0.47 %
MECHANICAL			
Tensile Strength Ultimate	ASTM D638 Type I	84 MPa	12200 psi
Tensile Strength at Yield	ASTM D638 Type I	Did not yield	Did not yield
Tensile Modulus	ASTM D638 Type I	8500 MPa	1230 ksi
Elongation at Break	ASTM D638 Type I	3.8 %	3.8 %
Elongation at Yield	ASTM D638 Type I	Did not yield	Did not yield
Flex Strength	ASTM D790	140 MPa	19700 psi
Flex Modulus	ASTM D790	7000 MPa	1010 ksi
Izod Notched Impact	ASTM D256	52 J/m	1 ft-lb/in
Izod Unnotched impact	ASTM D4812	490 J/m	9 ft-lb/in
Shore Hardness	ASTM D2240	80 D	80 D
THERMAL			
HDT 0.455MPa/66PSI	ASTM D648	181 C	357 F
HDT 1.82MPa/264 PSI	ASTM D648	177 C	351 F
ELECTRICAL			
Dielectric Strength (V/mil) @ #.## thickness	ASTM D149		
Dielectric Constant @ 1kHz	ASTM D150		
Dissipation Factor @ 1kHz	ASTM D150		
Volume Resistivity (ohm-cm)	ASTM D257		

Complete data set will be available in Q1 2024.