



# G-PAEK™ 1230CF

**Product Details:** Ultra high performance thermoplastic polymer, 30% carbon fiber reinforced in Polyether Ketone, semi-crystalline granules suitable for injection molding, easy flow, Black in color.

**Application Areas:** Suitable for high temperature applications, where higher strength & stiffness in load-bearing application is required. Chemically resistant to aggressive environments, suitable for sterilization for medical and food contact applications.

## Typical Properties:

PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1230CF
<b>General Properties</b>			
Density	23°C	g/cc	1.40
Water Absorption	ASTM D 570-98	%	0.04
Rockwell Hardness	ASTM D 785/M Scale, 23°C		108
Shore D Hardness	ASTM D 2240-05		91
Mold Shrinkage (420°C nozzle, 220°C Mold)	Along Flow	%	0.1
	Across Flow	%	0.6

<b>Thermal Properties</b>			
Glass Transition Temperature(Tg)	ASTM D 3418	°C	152
Melting Point (Tm)	ASTM D 3418	°C	372
Heat Deflection Temperature (HDT)	ASTM D 648 /1.8 MPa	°C	355
Continuous Use Temperature (Expected)	UL 746B	°C	280

<b>Mechanical Properties at 23°C</b>			
Tensile Strength	ASTM D 638	MPa	265
Tensile Modulus	ASTM D 638	GPa	28.6
Elongation at Break	ASTM D 638	%	2-3
Flexural Strength	ASTM D 790	MPa	410
Flexural Modulus	ASTM D 790	MPa	28
Izod Impact Strength(Notched)	ASTM D 256	J/m	65
Izod Impact Strength(Un-notched)	ASTM D 256	J/m	No Break



PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1230CF
<b>Electrical Properties</b>			
Surface Resistivity	ASTM D 257	Ω	10 <sup>6</sup>

<b>Fire Properties</b>			
Flammability	UL 94/0.8 mm	-	V-0

<b>Recommended Processing Conditions</b>	
Drying Temperature/Time	4-6 hrs at 150°C
Temperature Settings	390-420°C
Nozzle Temperature	420°C
Hopper/ Throat Temperature	60-80°C
Mold Temperature	200-220°C

<b>Nominal Granule Size</b>
• Dimensions, length 2.0 – 4.0 mm, diameter 2.0 – 3.5 mm
• No longs greater than 8.0 mm
• Granules of uniform cut and color

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