



G-PAEK™ 1230FCT

Product Details: Ultra high performance lubricated polymer, carbon fiber, PTFE, graphite, HBN and MoS₂ filled 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 applications is required. Excellent wear resistance. Chemically resistant to aggressive environments, suitable for sterilization for medical and food contact applications.

Typical Properties:

PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1230FCT
General Properties			
Density	23°C	g/cc	1.41
Water Absorption	ASTM D 570-98	%	0.05
Rockwell Hardness	ASTM D 785/M Scale		106
Shore D Hardness	ASTM D 2240-05		91
Mold Shrinkage (410°C nozzle, 220°C Mold)	Along Flow	%	0.10
	Across Flow	%	0.42

Thermal Properties			
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	348
Max. Service Temperature (Expected)	UL 746B	°C	280

Mechanical Properties at 23°C			
Tensile Strength	ASTM D 638	MPa	125
Tensile Modulus	ASTM D 638	GPa	19
Elongation at Break	ASTM D 638	%	1.2
Flexural Strength	ASTM D 790	MPa	210
Flexural Modulus	ASTM D 790	GPa	17.5
Izod Impact Strength(Notched)	ASTM D 256	J/m	45
Izod Impact Strength(Un-notched)	ASTM D 256	J/m	510



PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1230FCT
Fire Properties			
Flammability	UL 94/0.8 mm	-	V-0
Tribology Properties			
Sp. Wear Rate (Ko)	PV _{Limits} =41.94 MPa.m/s, V=1.5 m/s	(m ³ /Nm) X10 ⁽⁻¹⁶⁾	2.67
Coefficient of Friction (μ)	PV _{Limits} =41.94 MPa.m/s, V=1.5 m/s	(μ)	0.10
Recommended Processing Conditions			
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		
Nominal Granule Size			
<ul style="list-style-type: none"> • 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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