



G-PAEK™ 1230FC

Product Details: Ultra High Performance Thermoplastic material, 10% carbon fiber, 10% PTFE and 10% graphite reinforced in Poly Aryl Ether Ketone, semi-crystalline granules suitable for injection molding, easy flow, Black in color.

Application Areas: Suitable for high temperature application, where higher strength & stiffness in load-bearing application. 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™ 1230FC
General Properties			
Density	23°C	g/cc	1.45
Crystallinity	DSC	%	40
Water Absorption	24h, 23°C	%	0.05
Rockwell Hardness	ASTMD785/M Scale, 23°C		106
Shore D Hardness	23°C		91
Mold Shrinkage (410°C nozzle, 220°C Mold)	Along Flow	%	0.11
	Across Flow	%	0.50

Thermal Properties			
Glass Transition Temperature(Tg)	DSC/onset	°C	152-154
Melting Point (Tm)	DSC	°C	370-372
Heat Deflection Temperature (HDT)	1.8 MPa	°C	368

Mechanical Properties			
Tensile Strength	ASTMD 638/Break, 23°C	MPa	130-135
	ASTMD 638/Break, 100°C	MPa	120
	ASTMD 638/Break, 150°C	MPa	80
	ASTMD 638/Break, 200°C	MPa	55
	ASTMD 638/Break, 250°C	MPa	45
	ASTMD 638/Break, -10°C	MPa	145
	ASTMD 638/Break, -50°C	MPa	160
Tensile Modulus	ASTMD 638/23°C	GPa	11.50
Elongation at Break	ASTMD 638/Break,23°C	%	1.5-2
Flexural Strength	ASTMD790/23°C	MPa	210
Flexural Modulus	ASTMD790/23°C	GPa	10.50
Izod Impact Strength(Notched)	ASTMD256/23°C	J/m	40-45
Izod Impact Strength(Un-notched)	ASTMD256/23°C	J/m	610



PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1230FC
Rheological Properties			
CR Viscosity at 6 Min	Capillary Rheometer/@1000 s ⁻¹	Pa.s	-

Fire Properties			
Flammability	UL 94/0.8 mm	-	V-0

Recommended Processing Conditions	
Drying Temperature/Time	4-6 hrs at 150°C
Temperature Settings	390-425°C
Nozzle Temperature	425°C
Hopper/ Throat Temperature	60-80°C
Mold Temperature	200-220°C

PROGRESS THROUGH INNOVATIVE PRODUCTS & SERVICES

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