



G-PAEK™ 1220FE

Product Details: Ultra High Performance Thermoplastic polymer, 20% PTFE blended in Polyether Ketone, semi-crystalline granules suitable for injection molding, easy flow, light Beige in color.

Application Areas: Suitable for high temperature applications, where higher strength & less coefficient of Friction in load-bearing applications. e.g. Valve Seats & Mechanical Seals is required. Chemically resistant to aggressive environments, suitable for valve sheet application in ball valves.

Typical Properties:

PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1220FE
General Properties			
Density	23°C	g/cc	1.40
Water Absorption	24h, 23°C	%	0.04
Rockwell Hardness	ASTM D 785/M Scale		-
Shore D Hardness	ASTM D 2240-05		81
Mold Shrinkage (410°C nozzle, 220°C Mold)	Along Flow	%	1.4
	Across Flow	%	1.9

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	167
Continuous Use Temperature (Expected)	UL 746B	°C	280

Mechanical Properties at 23°C			
Tensile Strength	ASTM D 638	MPa	85
Tensile Modulus	ASTM D 638	GPa	3.6
Elongation at Break	ASTM D 638	%	2
Flexural Strength	ASTM D 790	MPa	164
Flexural Modulus	ASTM D 790	GPa	4.1
Izod Impact Strength(Notched)	ASTM D 256	J/m	45
Izod Impact Strength(Un-notched)	ASTM D 256	J/m	No Break



PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1220FE
Fire Properties			
Flammability	UL 94/0.8 mm	-	V-0
Recommended Processing Conditions			
Drying Temperature/Time	4-6 hrs at 150°C		
Temperature Settings	390-420°C		
Nozzle Temperature	420°C		
Hopper/ Throat Temperature	60-80°C		
Mold Temperature	200-220°C		

Nominal Granule Size
• 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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