



# G-PAEK™ 1120FE

**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™ 1120FE
<b>General Properties</b>			
Density	23°C	g/cc	1.40
Water Absorption	24h, 23°C	%	0.07
Rockwell Hardness	ASTM D 785/M Scale		-
Shore D Hardness	ASTM D 2240-05		-
Mold Shrinkage (410°C nozzle, 220°C Mold)	Along Flow	%	1.4
	Across Flow	%	1.9

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

<b>Mechanical Properties at 23°C</b>			
Tensile Strength	ASTM D 638	MPa	85
Tensile Modulus	ASTM D 638	GPa	5-8
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™ 1120FE
<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		

#### 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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