G-PAEK™ 1230GF

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

Application Areas: Suitable for high temperature applications, where higher strength in load-bearing applications 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™ 1230GF
General Properties			
Density	23°C	g/cc	1.50
Water Absorption	ASTM D 570-98	%	0.04
Spiral Flow (420°C nozzle, 220°C Mold)	ASTM D 3123	mm	31
Shore D Hardness	ASTM D 2240-05		92
Mold Shrinkage (420°C nozzle, 220°C Mold)	Along Flow	%	0.3
	Across Flow	%	1.0
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	358
Continuous Use Temperature (Expected)	UL 746B	°C	280
Mechanical Properties at 23°C			
Tensile Strength	ASTM D 638	MPa	185
Tensile Modulus	ASTM D 638	GPa	11.5
Elongation at Break	ASTM D 638	%	2-3
Flexural Strength	ASTM D 790	MPa	280
Flexural Modulus	ASTM D 790	GPa	10.5
Izod Impact Strength(Notched)	ASTM D 256	J/m	60
Izod Impact Strength(Un-notched)	ASTM D 256	J/m	610

R&D CENTRE/MARKETING DIVISION: GHARDA CHEMICALS LTD, B-27/29, PHASE-1 MIDC, DOMBIVLI (EAST), MUMBAI-421203, INDIA, TEL: +91-251-2803382-86 FAX: +91-251-2432640, Email: polymer@gharda.com

PROPERTY	TEST METHOD/CONDITIONS	UNIT	G-PAEK™ 1230GF
Electrical Properties			
Dielectric Strength	ASTM D 149/ 3.2 mm thickness	$kVmm^{-1}$	20
Surface Resistivity	ASTM D 257	Ω	10^{16}
Volume Resistivity	ASTM D 257	Ωcm^{-1}	10^{16}
Arc Resistance	ASTM D 495/@ 500 Volts	Sec	160
CTI	ASTM D 3638	V/50 drops	140

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

R&D CENTRE/MARKETING DIVISION: GHARDA CHEMICALS LTD, B-27/29, PHASE-1 MIDC, DOMBIVLI (EAST), MUMBAI-421203, INDIA, TEL: +91-251-2803382-86 FAX: +91-251-2432640, Email: polymer@gharda.com