

G-PAEK™ 1400G

Polyether Ketone
Gharda Chemicals Ltd.

Message:

Product Details: Ultra high Performance thermoplastic polymer, virgin, semicrystalline granules suitable for injection molding & compounding applications, high flow, Beige in color.
Application Areas: Intricate geometries with thin cross sections or long flow lengths, for high strength and stiffness as well as good ductility.

General Information			
Features	Ductile		
	High Flow		
	High Stiffness		
	High Strength		
	Semi Crystalline		
Appearance	Beige		
Forms	Granules		
Processing Method	Compounding		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.30	g/cm ³	
Spiral Flow ¹	64.8	cm	ASTM D3123
Molding Shrinkage ²			
Flow	1.0	%	
Across Flow	1.3	%	
Water Absorption (Equilibrium)	0.080	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	103		ASTM D785
Durometer Hardness (Shore D)	86		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	4300	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	80.0	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	2.0 to 5.0	%	ASTM D638
Flexural Modulus (23°C)	4500	MPa	ASTM D790
Flexural Strength (23°C)	115	MPa	ASTM D790
Compressive Strength	125	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	13	J/m	ASTM D256
Unnotched Izod Impact	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (1.8 MPa, Unannealed)	175	°C	ASTM D648
Continuous Use Temperature	280	°C	UL 746B
Glass Transition Temperature	152	°C	ASTM D3418
Melting Temperature	372	°C	ASTM D3418
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength (3.20 mm)	17	kV/mm	ASTM D149
Arc Resistance ³	175	sec	ASTM D495
Comparative Tracking Index (CTI) ⁴	145	V	ASTM D3638
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.800 mm)	V-0		UL 94
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec ⁻¹)	140 to 200	Pa·s	ASTM D3835
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 to 6.0	hr	
Hopper Temperature	60.0 to 80.0	°C	
Nozzle Temperature	410	°C	
Processing (Melt) Temp	390 to 410	°C	
Mold Temperature	200 to 220	°C	
NOTE			
1.	400°C nozzle, 220°C Mold		
2.	400°C nozzle, 210°C Mold		
3.	500 Volts		
4.	50 drops		

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