

Gharda Chemicals G-PAEK, 1200G Ultra High Performance PEK Polymer

Category : Polymer , Thermoplastic , Polyketone

Material Notes:

Product Details: Ultra High Performance Thermoplastic (Poly Aryl Ether Ketone) material, virgin semi-crystalline granules suitable for injection molding, easy flow, Beige in color
Application Areas: Suitable for high temperature application, high wear & abrasion resistance, high chemical resistance & for metal to plastics conversion, etc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Gharda-Chemicals-G-PAEK-1200G-Ultra-High-Performance-PEK-Polymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	
Water Absorption	0.080 % @Time 86400 sec	0.080 % @Time 24.0 hour	
Viscosity	200 cP @Shear Rate 1000 1/s	200 cP @Shear Rate 1000 1/s	CR Viscosity at 6 Min; Capillary Rheometer
Linear Mold Shrinkage, Flow	0.010 cm/cm	0.010 in/in	410Â°C nozzle, 220Â°C mold
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	410Â°C nozzle, 220Â°C mold
Crystallinity	40 %	40 %	DSC

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	103	103	ASTM D785
Hardness, Shore D	86	86	
Tensile Strength, Yield	25.0 MPa @Temperature 250 Â°C	3630 psi @Temperature 482 Â°F	ASTM D638
	35.0 MPa @Temperature 200 Â°C	5080 psi @Temperature 392 Â°F	ASTM D638
	55.0 MPa @Temperature 150 Â°C	7980 psi @Temperature 302 Â°F	ASTM D638
	75.0 MPa @Temperature 100 Â°C	10900 psi @Temperature 212 Â°F	ASTM D638
	100 - 110 MPa @Temperature 23.0 Â°C	14500 - 16000 psi @Temperature 73.4 Â°F	ASTM D638

Mechanical Properties	Metric	English	Comments
	@Temperature -10.0 Â°C	@Temperature 14.0 Â°F	ASTM D638
	160 MPa	23200 psi	
	@Temperature -50.0 Â°C	@Temperature -58.0 Â°F	ASTM D638
Elongation at Break	10 - 15 %	10 - 15 %	ASTM D638
Tensile Modulus	4.20 GPa	609 ksi	ASTM D638
Flexural Strength	185 - 190 MPa	26800 - 27600 psi	ASTM D790
Flexural Modulus	4.10 GPa	595 ksi	ASTM D790
Izod Impact, Notched	0.550 - 0.600 J/cm	1.03 - 1.12 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	370 - 372 Â°C	698 - 702 Â°F	DSC
Deflection Temperature at 1.8 MPa (264 psi)	167 Â°C	333 Â°F	
Glass Transition Temp, Tg	152 - 154 Â°C	306 - 309 Â°F	DSC/onset
Flammability, UL94	V-0	V-0	
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Surface Resistivity per Square	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Strength	16.0 kV/mm	406 kV/in	ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Arc Resistance	175 sec	175 sec	at 500 Volts; ASTM D495
Comparative Tracking Index	145 V	145 V	per 50 drops; ASTM D3638

Processing Properties	Metric	English	Comments
Processing Temperature	385 - 410 Â°C	725 - 770 Â°F	
Nozzle Temperature	410 Â°C	770 Â°F	

Mold Temperature Processing Properties	200 - 220 Â°C Metric	392 - 428 Â°F English	Comments
Drying Temperature	150 Â°C	302 Â°F	
Dry Time	4 - 6 hour	4 - 6 hour	

Descriptive Properties	Value	Comments
Hopper/ Throat Temperature	60-80Â°C	

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