

Performance Polymers IPS II PPL-C4050 PEKK (Polyetherketoneketone) Linear Molding Grade

Category : Polymer , Thermoplastic , Polyketone , PEKK, Unreinforced

Material Notes:

Amber pellets; neat resin Information provided by Infinite Polymer System II.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Performance-Polymers-IPS-II-PPL-C4050-PEKK-Polyetherketoneketone-Linear-Molding-Grade.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 lb/in ³	ASTM D792
Water Absorption	<= 0.20 %	<= 0.20 %	24 hr; ASTM D570
Linear Mold Shrinkage	0.010 cm/cm	0.010 in/in	
Melt Flow	120 g/10 min @Load 8.40 kg, Temperature 360 °C	120 g/10 min @Load 18.5 lb, Temperature 680 °F	
Crystallinity	32 %	32 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	88	88	ASTM D785
Tensile Strength at Break	110 MPa	16000 psi	ASTM D638
Elongation at Break	>= 12 %	>= 12 %	ASTM D638
Modulus of Elasticity	4.40 GPa	638 ksi	ASTM D638
Flexural Yield Strength	193 MPa	28000 psi	ASTM D790
Flexural Modulus	4.60 GPa	667 ksi	ASTM D790
Compressive Yield Strength	207 MPa	30000 psi	ASTM D695
Poissons Ratio	0.40	0.40	
Shear Modulus	1.57 GPa	228 ksi	Calculated
Shear Strength	138 MPa	20000 psi	ASTM D732
Izod Impact, Notched	0.530 J/cm @Thickness 3.17 mm	0.993 ft-lb/in @Thickness 0.125 in	ASTM D256
Coefficient of Friction	0.173	0.173	ASTM D1894
Coefficient of Friction, Static			ASTM D1894

Mechanical Properties	0.262 Metric	0.262 English	Comments
CTE, linear	21.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	11.7 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	Below glass transition temp; ASTM D696
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	360 °C	680 °F	DSC
Maximum Service Temperature, Air	260 °C	500 °F	UL Continuous Use Temp.
Deflection Temperature at 1.8 MPa (264 psi)	175 °C	347 °F	ASTM D648
Glass Transition Temp, Tg	160 °C	320 °F	DSC
Flammability, UL94	V-0	V-0	
NBS Smoke Density	<= 10	<= 10	
Oxygen Index	40 %	40 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Surface Resistance	2.00e+16 ohm	2.00e+16 ohm	ASTM D257
Dielectric Constant	3.3 @Frequency 1000 Hz	3.3 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	23.6 kV/mm	599 kV/in	ASTM D149
Dissipation Factor	0.0040 @Frequency 1000 Hz	0.0040 @Frequency 1000 Hz	ASTM D150

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