

Quadrant EPP Ketron® HPV PEEK + carbon fibres + PTFE + graphite, bearing grade, extruded (ISO Data)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Carbon Fiber Filled

Material Notes:

The addition of carbon fibres, PTFE and graphite to virgin PEEK results in a Ketron PEEK "bearing grade". Its excellent tribological properties (low friction, long wear and high pressure-velocity capabilities) make this grade especially suited for wear and friction applications. Very high maximum allowable service temperature in air (250 °C continuously, up to 310 °C for short periods of time) High mechanical strength, stiffness and creep resistance, also at elevated temperatures Excellent chemical and hydrolysis resistance Excellent wear & frictional behaviour Very good dimensional stability Excellent resistance to high energy radiation (gamma- and X-rays) Inherent low flammability and very low levels of smoke evolution during combustion

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Ketron-HPV-PEEK-carbon-fibres-PTFE-graphite-bearing-grade-extruded-ISO-Data.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.16 %	0.16 %	50% RH
Water Absorption at Saturation	0.35 %	0.35 %	
Outgassing - Total Mass Loss	0.16 %	0.16 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ISO 2039-2
Hardness, Shore D	86	86	
Ball Indentation Hardness	215 MPa	31200 psi	ISO 2039-1
Tensile Strength	78.0 MPa	11300 psi	at Break (NYP); ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	5.90 GPa	856 ksi	ISO 527-1/-2
Flexural Strength	125 MPa	18100 psi	
Compressive Strength	46.0 MPa	6670 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	80.0 MPa	11600 psi	ISO 604
	@Strain 2 %	@Strain 2 %	
	120 MPa	17400 psi	ISO 604

Mechanical Properties	@Strain 5 % Metric	@Strain 5 % English	Comments
K Factor (ISO)	2.0 $\mu\text{m}/\text{km}$	2.0 $\mu\text{m}/\text{km}$	
Charpy Impact Unnotched	2.50 J/cm ²	11.9 ft-lb/in ²	ISO 179-1/1eU
Charpy Impact, Notched	0.300 J/cm ²	1.43 ft-lb/in ²	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.15 - 0.25	0.15 - 0.25	
Limiting Pressure Velocity	0.420 MPa-m/sec	12000 psi-ft/min	at 1 m/s unlubricated
	0.660 MPa-m/sec	18800 psi-ft/min	at 0.1 m/s unlubricated

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	19.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Thermal Conductivity	0.780 W/m-K	5.41 BTU-in/hr-ft ² -°F	
Melting Point	340 °C	644 °F	DSC, 10°C/min.; ISO 11357-1/-3
Maximum Service Temperature, Air	250 °C	482 °F	Continuous
Deflection Temperature at 1.8 MPa (264 psi)	195 °C	383 °F	ISO 75-1/-2
Flammability, UL94	V-0	V-0	
Oxygen Index	43 %	43 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	$\leq 1\text{e}+13$ ohm	$\leq 1\text{e}+13$ ohm	IEC 60093

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
European Food 1935/2004	No	No	
FDA	No	No	
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Limited	Limited	
Acids, Weak	Acceptable	Acceptable	

Alphabet Chemical Resistance Properties	Acceptable Metric	Acceptable English	Comments
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Acceptable	Acceptable	
Continuous Sunlight	Acceptable	Acceptable	
Hot Water / Steam	Acceptable	Acceptable	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Acceptable	Acceptable	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China