

Quadrant EPP Ketron® TX PEEK + solid lubricant, extruded (ISO Data)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Unreinforced

Material Notes:

This member of the Ketron PEEK family has been developed especially for the food industry. Like Ketron PEEK-1000, this new internally lubricated material has a food contact compliant composition, but offers far superior wear and frictional performance making it especially suitable for a wide variety of bearing and wear applications in the 100 to 200 °C service temperature range. 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-TX-PEEK-solid-lubricant-extruded-ISO-Data.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.18 %	0.18 %	50% RH
Water Absorption at Saturation	0.40 %	0.40 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	97	97	ISO 2039-2
Hardness, Shore D	85	85	
Ball Indentation Hardness	195 MPa	28300 psi	ISO 2039-1
Tensile Strength	90.0 MPa	13100 psi	at Yield; ISO 527-1/-2
Elongation at Break	6.0 %	6.0 %	ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-1/-2
Tensile Modulus	3.75 GPa	544 ksi	ISO 527-1/-2
Flexural Strength	140 MPa	20300 psi	
Compressive Strength	31.0 MPa	4500 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	61.0 MPa	8850 psi	ISO 604
	@Strain 2 %	@Strain 2 %	
	120 MPa	17400 psi	ISO 604
	@Strain 5 %	@Strain 5 %	

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	3.00 J/cm ²	14.3 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	0.25 - 0.35	0.25 - 0.35	
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	55.0 µm/m-°C	30.6 µin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Thermal Conductivity	0.250 W/m-K	1.74 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)	155 °C	311 °F	ISO 75-1/-2
Flammability, UL94	V-0	V-0	
Oxygen Index	40 %	40 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.0e+14 ohm-cm	>= 1.0e+14 ohm-cm	IEC 60093
Surface Resistivity per Square	>= 1.0e+13 ohm	>= 1.0e+13 ohm	IEC 60093
Dielectric Constant	3.2	3.2	IEC 60250
	@Frequency >=100000 Hz	@Frequency >=100000 Hz	
Dielectric Strength	22.0 kV/mm	559 kV/in	
Dissipation Factor	0.0010	0.0010	IEC 60250
	@Frequency 100000 Hz	@Frequency 100000 Hz	
Comparative Tracking Index	150 V	150 V	IEC 60112

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Limited	Limited	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Acceptable	Acceptable	
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Acceptable	Acceptable	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Acceptable	Acceptable	

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