

Quadrant EPP Ketron® CM 1030HT PEEK Polyetheretherketone, 30% carbon fiber reinforced, compression molded (ASTM Product Data Sheet)

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

Material Notes:

Data provided by Quadrant Engineering Plastic Products

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Ketron-CM-1030HT-PEEK-Polyetheretherketone-30-carbon-fiber-reinforced-compression-molded-ASTM-Product-Data-Sheet.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	ASTM D792
Water Absorption	0.15 %	0.15 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.50 %	0.50 %	Immersion; ASTM D570(2)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	110	110	ASTM D785
Hardness, Rockwell R	125	125	ASTM D785
Hardness, Shore D	91	91	ASTM D2240
Tensile Strength	110 MPa	16000 psi	ASTM D638
Elongation at Break	3.0 %	3.0 %	ASTM D638
Tensile Modulus	9.31 GPa	1350 ksi	ASTM D638
Flexural Strength	152 MPa	22000 psi	ASTM D790
Flexural Modulus	7.93 GPa	1150 ksi	ASTM D790
Compressive Strength	200 MPa	29000 psi	10% Def.; ASTM D695
Compressive Modulus	3.76 GPa	545 ksi	ASTM D695
Izod Impact, Notched	0.534 J/cm	1.00 ft-lb/in	ASTM D256 Type A
Coefficient of Friction, Dynamic	0.24	0.24	Dry vs. Steel; QTM55007
K (wear) Factor	171 x 10 ⁻⁸ mm ³ /N-M	85.0 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	QTM 55010
Limiting Pressure Velocity	0.525 MPa-m/sec	15000 psi-ft/min	4:1 safety factor; QTM 55007

Thermal Properties	Metric	English	Comments
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Thermal Properties CTE, linear	32.6 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Metric	18.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ English	Comments ASTM E831
	@Temperature -40.0 - 149 $^\circ\text{C}$	@Temperature -40.0 - 300 $^\circ\text{F}$	
Thermal Conductivity	0.908 W/m-K	6.30 BTU-in/hr-ft ² - $^\circ\text{F}$	ASTM F433
Melting Point	343 $^\circ\text{C}$	650 $^\circ\text{F}$	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	249 $^\circ\text{C}$	480 $^\circ\text{F}$	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	249 $^\circ\text{C}$	480 $^\circ\text{F}$	ASTM D648
Flammability, UL94	V-0	V-0	1/8 inch (Estimated Rating)

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	≤ 1000 ohm	≤ 1000 ohm	EOS/ESD S11.11

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
Canada AG	No	No	
FDA	No	No	
NSF	No	No	
USDA	No	No	
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	
Conductive / Static Dissipative	Yes	Yes	
Continuous Sunlight	Acceptable	Acceptable	
Hot Water / Steam	Acceptable	Acceptable	

Hydrocarbons - Aliphatic Chemical Resistance Properties	Acceptable Metric	Acceptable English	Comments
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Acceptable	Acceptable	

Descriptive Properties	Value	Comments
Color	Natural	
Machinability	7	1-10, 1=Easier to Machine

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