

Mitsubishi Chemical Advanced Materials Ketron® CA30 LSG PEEK, Extruded 30% Carbon Fiber Reinforced Polyetherether Ketone (ASTM Product Data Sheet)
Categories: Polymer; Thermoplastic; Polyketone; Polyetheretherketone (PEEK); Polyetheretherketone, PEEK, Carbon Fiber Filled

Material Notes: Quadrant Engineering Plastic Products is now Mitsubishi Chemical Advanced Materials.

Physical Properties	Metric	English	Comments
Specific Gravity	1.41 g/cc	1.41 g/cc	ASTM D792
Water Absorption	0.060 %	0.060 %	Immersion, 24hr; ISO 62
Water Absorption at Saturation	0.30 %	0.30 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	102	102	ISO 2039-2
Hardness, Shore D	93	93	
Tensile Strength	131 MPa	19000 psi	ASTM D638
Tensile Strength at 150°C (300°F)	6.89 MPa	1000 psi	ASTM D638
Tensile Strength at 65°C (150°F)	96.5 MPa	14000 psi	ASTM D638
Elongation at Break	5.0 %	5.0 %	ISO 527
Tensile Modulus	7.58 GPa	1100 ksi	ASTM D638
Flexural Strength	177.5 MPa	25750 psi	ASTM D790
Flexural Modulus	8.62 GPa	1250 ksi	ASTM D790
Compressive Strength	200 MPa	29000 psi	10% Def.; ASTM D695
Izod Impact, Notched	0.550 J/cm	1.03 ft-lb/in	
Charpy Impact Unnotched	5.00 J/cm ²	23.8 ft-lb/in ²	ISO 179-1/1eU
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.20	0.20	Dry vs. Steel; QTM55007
K (wear) Factor	302 x 10 ⁻⁸ mm ³ /N-M	150 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	
Limiting Pressure Velocity	0.876 MPa-m/sec	25000 psi-ft/min	4:1 safety factor; QTM 55007

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	<= 1e+05	<= 1e+05	IEC 60093
Dielectric Strength	1.26 kV/mm	32.0 kV/in	

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 µm/m-°C @Temperature -40.0 - 149 °C	10.0 µin/in-°F @Temperature -40.0 - 300 °F	ASTM E831
Thermal Conductivity	0.922 W/m-K	6.40 BTU-in/hr-ft ² -°F	
Melting Point	340 °C	644 °F	ISO 11357
Maximum Service Temperature, Air	250 °C	482 °F	
Deflection Temperature at 1.8 MPa (264 psi)	270 °C	518 °F	ISO 75
Minimum Service Temperature, Air	-20.0 °C	-4.00 °F	
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	
	V-0 @Thickness 3.00 mm	V-0 @Thickness 0.118 in	
Oxygen Index	40 %	40 %	ISO 4589

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	Yes	Yes	

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	Limited	Limited
Hot Water / Steam	Acceptable	Acceptable
Hydrocarbons - Aliphatic	Acceptable	Acceptable
Hydrocarbons - Aromatic	Acceptable	Acceptable
Inorganic Salt Solutions	Acceptable	Acceptable
Ketones, Esters	Acceptable	Acceptable
Descriptive Properties		
Color	Natural	



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