Mitsubishi Chemical Advanced Materials Ketron™ 1000 PEEK

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Water Absorption at Saturation	0.500 %	0.500 %	ASTM D570 (17)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	105	105	ASTM D785
Hardness, Shore D	85.0	85.0	ISO 868
Tensile Strength	115 MPa	16700 psi	ISO 527-1/-2 (7)
Elongation at Yield	5.00 %	5.00 %	ISO 527-1/-2 (7)
Flexural Strength	170 MPa	24700 psi	ISO 178 (12)
Compressive Yield Strength	38.0 MPa @Strain 1.00 %	5510 psi @Strain 1.00 %	ISO 604 (10)
	75.0 MPa @Strain 2.00 %	10900 psi @Strain 2.00 %	ISO 604 (10)
	140 MPa @Strain 5.00 %	20300 psi @Strain 5.00 %	ISO 604 (10)
Shear Strength	55.0 MPa	7980 psi	ASTM D732
Charpy Impact, Notched	0.350 J/cm²	1.67 ft-lb/in²	ISO 179-1/1eA

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	1.00e+14 ohm	1.00e+14 ohm	ANSI/ESD STM 11.11
Dielectric Constant	3.30 @Frequency 1.00e+6 Hz	3.30 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	18.9 kV/mm	480 kV/in	ASTM D149
	24.0 kV/mm	610 kV/in	IEC 60243-1 (15)
Dissipation Factor	0.00300 @Frequency 1.00e+6 Hz	0.00300 @Frequency 1.00e+6 Hz	ASTM D150

Thermal Properties	Metric	English	Comments
CTE, linear	46.8 µm/m-°C	26.0 µin/in-°F	ASTM E-831 (TMA)
	50.0 µm/m-°C @Temperature 23.0 - 100 °C	27.8 µin/in-°F @Temperature 73.4 - 212 °F	
	55.0 µm/m-°C @Temperature 23.0 - 150 °C	30.6 µin/in-°F @Temperature 73.4 - 302 °F	
	130 µm/m-°C @Temperature >=150 °C	72.2 µin/in-°F @Temperature >=302 °F	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft²-°F	
	0.252 W/m-K	1.75 BTU-in/hr-ft²-°F	
Melting Point	340 °C	644 °F	ASTM D3418
Maximum Service Temperature, Air	249 °C	480 °F	Continuous Use Temperature in Air after 20000 hr
Deflection Temperature at 1.8 MPa (264 psi)	160 °C	320 °F	ASTM D648
Minimum Service Temperature, Air	-50.0 °C	-58.0 °F	

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, 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

Descriptive Properties

ESd category	Insulative