

■ Polyetheretherketone

Property	ASTM Test Method	Standard	
Specific Gravity	D792	1.32	
Tensile Strength [MPa]	D638	97	
Tensile Elongation [%]	D638	80	
Young's Modulus [10^3 MPa]	D638	2.8	
Compressive Strength at 5% strain [MPa]	D695	127	
Flexural Strength [MPa]	D790	142	
Izod Notched Impact Strength (1/2in×1/2in notched, 23°C) [J/m]	D256	59	
Rockwell Hardness	D785	M98	
Thermal Conductivity [W/(m·K)]	C177	0.20	
Specific Heat [J/(kg·K)]	—	1,330	
Coefficient of Linear Expansion [$10^{-5}/^{\circ}\text{C}$]	D696	4.8	
Continuous Use Temperature [°C]	—	240	
Deflection Temperature [°C]	D648	0.451MPa	—
		1.813MPa	152
Volume Resistivity (23°C 50% RH) [$\Omega\cdot\text{m}$]	D257	$10^{14}\sim 10^{15}$	
Dielectric Strength [kV/mm]	D149	shorttime 3.2mm thickness step	19
		3.2mm thickness	—
Dielectric Constant	D150	60Hz	—
		10^3 Hz	3.2~3.4
		10^6 Hz	—
Dissipation Factor	D150	60Hz	—
		10^3 Hz	0.003
		10^6 Hz	0.003
Arc resistance [sec]	D495	—	
Water Absorption (24 hours 3.2mm Thickness) [%]	D570	0.14	
Flammability or Rate of Burning	D635/UL94	V-0	
sunlight resistances (color change)	—	—	
Weak acid resistances	D543	resist	
Strong acid resistances	D543	resist(except Concentrated sulfuric acid)	
Weak alkali resistances	D543	resist	
Strong alkali resistances	D543	resist	
Organic solvent resistances	D543	resist	
Transparency	—	opaque	
Sand slurry Wear (SS400 =100)	(Original)	—	
Thrust Wear (by S45C P=1,960kPa V=0.25m/sec) [$\times 10^{-6}\text{cm}^3/(P\cdot V\cdot h)$]	(Original)	—	
Allowable PV [kPa·m/sec]	(Original)	—	

The material properties in above table are only for reference, measured by each test methods, and do not guarantee minimum value. And these properties might be changed without notice, so it is recommended to refer the data in the newest catalogues.