



Technical Properties of ZL®1500 PEEK (Victrex 450G)

	Test Method ASTM	Units	ZL® 1500 PEEK (Victrex® 450G)
Mechanical Properties			* Alternative test method if notated
Specific Gravity	D-792	gm/cm ³	1.30
Tensile Strength, 73° F	D-638	psi	*15,225 (ISO 527)
Tensile Modulus, 73° F	D-638	psi	*609,000 (ISO 527)
Elongation, Break, 73° F	D-638	%	*20 (ISO 527)
Flexural Strength, 73° F	D-790	psi	*23,200 (ISO 178)
Flexural Modulus, 73° F	D-790	psi	*565,000 (ISO 178)
Compressive Strength, 73° F	D-695	psi	17,100
Compressive Modulus	D-695	psi	*507,500 (ISO 604)
Impact Strength, Notched, 73° F	D-256	ft-lbs/in	*1.66 (ISO 179/1EA)
Hardness, Rockwell	D-785	R	R126(M99)
Hardness, Durometer, Shore D	2240	D	*D86 (ISO 868)
Shear Strength	D-732	psi	7,600
Coefficient of Friction against steel	-	-	0.40
Thermal Properties			
Deflection Temperature - 66 psi	D-648	°F	-
Deflection Temperature - 264 psi	D-648	°F	320
Maximum Temperature - Long Term	-	°F	500
Maximum Temperature - Short Term	-	°F	572
Melting Point		°F	*644 (ISO 3146)
Coefficient of Lineral Thermal Expansion	D-696	in/in/ °F	2.6x10 ⁻⁵
Thermal Conductivity	C-177	Btu-in/hr-ft ² -°F	1.75
Electric Properties			
Dielectric Strength	D-149	V/mil	*380 (IEC 60243)
Dielectric Constant, 1kHz	D-150		3.05
Dissipation Factor, 1 kHz	D-150		0.003
Flammability	UL 94		V-0
Volume Resistivity, 73° F	D-257	ohm-cm	*10 ¹⁵ (IEC 60093)
Water Absorption Rates			
Water Absorption, 24 hrs. 73° F	D-570	%	0.5
Water Absorption, Saturation, 73° F	D-570	%	0.5