

Ryton® Data Sheet

		Tectron PPS	40% Glass-Filled Ryton PPS	40% Glass-Filled Ryton PPS	
Mechanical	ASTM Test Method	Compression Molded PPS	Compression Molded 40% GF PPS	Injection Molded R-4	Units
Strength to Weight Ratio	-	-	-	-	ksi
Specific Gravity @73 F	D792	1.35	1.7	1.67	-
Tensile Strength @73 F, (ult)/(yld)	D638	10,000 (ult)	13,000 (ult)	22,000 (ult)	psi
Tensile Modulus of Elasticity @73 F	D638	325,000	730,000	2,200,000	psi
Tensile Elongation at Break @73 F	D638	5	2	1	%
Flexural Strength @73 F	D790	18,000	23,000	29,500	psi
Flexural Modulus of Elasticity @73 F	D790	370,000	1,000,000	2,100,000	psi
Shear Strength @73 F	D732	-	-	13,000	psi
Comprehensive Strength, (% Deformation) @73 F	D695	18,000 (10)	24,000 (10)	26,000 (10)	psi
Comprehensive Modulus of Elasticity @73 F	D695	410,000	1,300,000	-	psi
Hardness, Rockwell, Scale as noted @73 F	D785	M93 (R125)	M94 (R125)	(R123)	-
Hardness, Durometer, Shore D @73 F	D2240	D85	D86	-	-
Izod Impact, (Notched) @73 F	D256 Type A	0.6	1	1.7	ft-lb/in of notch
Coefficient of Friction, (Dry vs Steel) Dynamic	-	0.4	-	-	-
Limiting PV, (with 4 to 1 factor of safety applied)	-	-	-	-	psi-ft/min
Thermal	ASTM Test Method	Compression Molded PPS	Compression Molded 40% GF PPS	Injection Molded R-4	Units
Coefficient of Linear Thermal Expansion @73 F	E-831 (TMA)	2.8 E-05	2.5 E-05	-	in/in/F
Heat Deflection Temperature @264 psi	D648	250	490	500	F
Tg-Glass transition temperature, (Amorphous)	D3418	-	-	-	F
Melting Point, (VS=Vicat Softening Temp.)	D3418	540	540	-	F
Continuous Service Temperature in Air, (Max.)	-	425	450	428	F
Thermal Conductivity	-	2	2.1	2.1	BTU-in/hr-ft ² -F
Electric	ASTM Test Method	Compression Molded PPS	Compression Molded 40% GF PPS	Injection Molded R-4	Units
Dielectric Strength, Short Term	D149	540	385	450	Volts/mil
Volume Resistivity	D257	4.5 E+16	-	1.0 E+16	ohm-cm
Dielectric Constant @10E6 Hz	D150	3	-	3.8	-
Dissipation Factor @10E6 Hz	D150	0.001	-	0.001	-
Flammability @3.1 mm unless noted	UL94	V-0	V-0	V-0/5VA	-
H2O	ASTM Test Method	Compression Molded PPS	Compression Molded 40% GF PPS	Injection Molded R-4	Units
Water Absorption, Immersion, 24 hours	D570(7)	0.01	0.02	-	% by weight
Water Absorption, Saturation	D570(7)	0.03	0.03	0.05	% by weight