VIVAK Properties

Physical	Test method	Units	VIVAK PETG
Specific Gravity/Relative Density	ASTM D-792 / ISO 1183		1.27
Optical Refractive Index	ASTM D-542 / ISO 489/A		1.57
Light Transmission -Total	ASTM D-1003 / ISO 13468-1	%	86
Light Transmission - Haze	ASTM D-1003 / ISO 14782	%	1.0
Water Absorption	ASTM D-570 / ISO 62	% By wt	0.2

Mechanical	Test method	Units	VIVAK PETG
Tensile Strength	ASTM D-638 / ISO 527	psi	7,700
Tensile Modulus of Elasticity	--	psi	320,000
Flexural Strength	ASTM D-790 / ISO 178	psi	11,200
Flexural Modulus of Elasticity	ASTM D-790 / ISO 178	psi	310,000
Dielectric Constant @1kHz	ASTM D-150		2.6
Dielectric Contstant @1mHz	ASTM D-150		2.4
Dielectric Strength	ASTM D-149	volts/mil	410
Compressive Strength	ASTM D-695 / ISO 604	psi	8,000
Shear Strength	ASTM D-732	psi	9,000
Izod Impact Strength – Molded Notch	ASTM D-256 / ISO 180	ft-lb/in Notch	1.7
Izod Impact Strength – Milled Notch	ASTM D-256 / ISO 180	ft-lb/in Notch	1.2
Drop Dart Impact	ASTM D-3763	ft-lbs	22
Rockwell Hardness	ASTM D-785 / ISO 2039-2		R-115

Thermal	Test method	Units	VIVAK PETG
Deflection Temperature @ 264 psi (1.8 MPa)	ASTM D-648 / ISO 75-2/A	°F	157
Deflection Temperature @ 66 psi (0.45 MPa)	ASTM D-648	°F	164
Coefficient of Thermal Expansion	ASTM D-696 / ISO 11359	in/(in-°F) x 10^{-5}	3.8
Thermal Conductivity	ASTM E-1225	BTU-ft/(hr-ft^2-°F)	0.13
Flammability (Burning Rate)	ASTM D-635	In/minute	0.06
Flammability	UL 94 / UL 94		HB
Smoke Density Rating	ASTM D-2843	%	53.8
Self-Ignition Temperature	ASTM D-1929	°F	880
Flame Spread Index	ASTM E-84		85
Smoke Developed Index	ASTM E-84		450
Glasss Transition Temperature	ASTM D-3418	°F	178

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.