



Typical Properties of

**Vespel® SP-21****Polyimide with 15% Graphite Filler**

Process: Extruded / Direct Formed

Property	Test Method	Unit	Value
Specific Gravity	D792	--	1.51
Tensile Strength	D638	psi	9,500
Tensile Modulus	D638	psi	N / A
Elongation	D638	%	4.5
Flexural Strength	D790	psi	16,000
Flexural Modulus	D790	psi	550,000
Compressive Strength	D695	psi	19,300
Compressive Modulus	D695	psi	420,000
Hardness, Rockwell	D785	--	M88
Hardness Durometer	--	--	N / A
Izod Impact (notched)	D256	ft. lb of notch	0.8
Coeff. of Friction (Dynamic)	--	dry v.s steel	0.24
Coeff. of Linear Therm. Expan.	E831/ D696	in./in./°F	$2.7 \times 10^{-5}$
Continuous Use Temperature	--	°F	550
Heat Deflection Temperature	D648	°F	680
Glass Transition Temperature	D3418	°F	615
Melting Point	D3418	°F	N / A
Thermal Conductivity	E1530-11	BTU in/hr ft <sup>2</sup> °F	6
Dielectric Strength	D149	Volts/mil	250
Surface Resistivity	EOS/ESD 511.11	ohm/square	$>10^{12}$
Flammability	UL94	--	V-0
Water Absorption, 24 hrs.	D570	% by weight	0.19
Water Absorption, Saturation	D570	% by weight	0.57
Limiting PV (4:1 Safety Factor)	--	--	35,000
K-Factor	--	--	N / A
FDA Compliance	--	--	No

Note: The data provided is for reference purposes only. Additional testing may be required for design specifications or quality control.  
All values at 73 F unless otherwise stated.