

Semitron® ESd 520HR Material Specifications

Semitron® is a high performance material for use in the semiconductor industry.

Physical Properties	Units	Test	ESd 520HR
Density	lb/in ³ g/cm ³	D792	0.057 1.58
Water Absorption, 24 hrs.	%	D570	0.6
Water Absorption, Saturation	%	D570	-

Mechanical Properties	Units	Test	ESd 520HR
Tensile Strength	psi	D638	12,000
Tensile Modulus	psi	D638	800,000
Tensile Elongation at Break	%	D638	3
Flexural Strength	psi	D790	20,000
Flexural Modulus	psi	D790	850,000
Compressive Strength	psi	D695	30,000
Compressive Modulus	psi	D695	600,000
Hardness Rockwell	-	D785	M108
Izod Impact Notched	ft-lb/in	D256	0.8

Thermal Properties	Units	Test	ESd 520HR
Coefficient of Linear Thermal Expansion	X 10 ⁻⁵ in./in./°F	D696	1.5
Heat Deflection Temperature	@264 psi °F/°C	D648	520 / 271
Melting Temperature	°F/°C	D3418	520 / 271
Max. Operating Temperature	°F/°C	-	500 / 260
Thermal Conductivity	BTU- in/ft ² -hr.-°F x 10 ⁻⁴ cal/cm-sec-°C	C177	- -
Flammability Rating	-	UL94	V - 0

Electrical Properties	Units	Test	ESd 520HR
Dielectric Strength	(V/mil) short time, 1/8" thick	D149	-
Dielectric Constant	@1 KHz	D150	-
Surface Resistivity	Ohms/Square	EOS/ESD S11.11	10 ¹⁰ – 10 ¹²
Max Static Decay	sec	Mil-B-81705C	-

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