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## Semitron® ESd 410C Material Specifications

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

Physical Properties	Units	Test	ESd 410C
Density	lb/in <sup>3</sup> g/cm <sup>3</sup>	D792	0.051 1.41
Water Absorption, 24 hrs.	%	D570	0.3
Water Absorption, Saturation	%	D570	-

Mechanical Properties	Units	Test	ESd 410C
Tensile Strength	psi	D638	9000
Tensile Modules	psi	D638	850,000
Tensile Elongation at Break	%	D638	2
Flexural Strength	psi	D790	12,000
Flexural Modulus	psi	D790	850,000
Compressive Strength	psi	D695	19,500
Compressive Modulus	psi	D695	600,000
Hardness Rockwell	-	D785	M115 / R125
Izod Impact Notched	ft-lb/in	D256	0.8

Thermal Properties	Units	Test	ESd 410C
Coefficient of Linear Thermal Expansion	X 10 <sup>-5</sup> in./in./°F	D696	1.8
Heat Deflection Temperature	@264 psi °F/°C	D648	410 / 210
Melting Temperature	°F/°C	D3418	n/a
Max. Operating Temperature	°F/°C	-	338 / 170
Thermal Conductivity	BTU- in/ft <sup>2</sup> -hr.-°F x 10 <sup>-4</sup> cal/cm-sec-°C	C177	- -
Flammability Rating	-	UL94	V - 0

Electrical Properties	Units	Test	ESd 410C
Dielectric Strength	(V/mil) short time, 1/8" thick	D149	-
Dielectric Constant	@1 KHz	D150	-
Surface Resistivity	Ohms/Square	EOS/ESD S11.11	10 <sup>4</sup> – 10 <sup>6</sup>
Max Static Decay	sec	Mil-B-81705C	-

\*\*The information provided in this table is a compilation of publicly available data. This information is provided for comparison purposes only, and is not intended to be warrantable. Further, Technical Products, Inc. disclaims any and all liability from errors, in accuracies, or omissions.