

## Semitron® ESd 225 Material Specifications

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

Physical Properties	Units	Test	ESd 225
Density	lb/in <sup>3</sup> g/cm <sup>3</sup>	D792	0.048 1.33
Water Absorption, 24 hrs.	%	D570	2.0
Water Absorption, Saturation	%	D570	-

Mechanical Properties	Units	Test	ESd 225
Tensile Strength	psi	D638	6100
Tensile Modulus	psi	D638	225,000
Tensile Elongation at Break	%	D638	10
Flexural Strength	psi	D790	6000
Flexural Modulus	psi	D790	190,000
Compressive Strength	psi	D695	-
Compressive Modulus	psi	D695	-
Hardness Rockwell	-	D785	M74 / R109
Izod Impact Notched	ft-lb/in	D256	1.5

Thermal Properties	Units	Test	ESd 225
Coefficient of Linear Thermal Expansion	X 10 <sup>-5</sup> in./in./°F	D696	9.3
Heat Deflection Temperature	@264 psi °F/°C	D648	225 / 107
Melting Temperature	°F/°C	D3418	- / -
Max. Operating Temperature	°F/°C	-	180 / 82
Thermal Conductivity	BTU- in/ft <sup>2</sup> -hr.-°F x 10 <sup>-4</sup> cal/cm-sec-°C	C177	- -
Flammability Rating	-	UL94	HB

Electrical Properties	Units	Test	ESd 225
Dielectric Strength	(V/mil) short time, 1/8" thick	D149	275
Dielectric Constant	@1 KHz	D150	4.3
Surface Resistivity	Ohms/Square	EOS/ESD S11.11	10 <sup>9</sup> - 10 <sup>10</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.