

## Semitron® ESd 410C (Polyetherimide, static dissipative)

Semitron ESd 410C is designed for use in the semiconductor industry, where electrostatic dissipation is a requirement. It is a compression-molded, static dissipative polyetherimide that performs at temperatures up to 410°F and has surface resistivity in the conductive range.

Property	ASTM Test Method	Units	Semitron® ESd 410C
<b>Physical</b>			
Specific Gravity	D792		1.41
Water Absorption @24 hours	D570	%	0.01
Water Absorption @Saturation	D570	%	0.03
<b>Mechanical</b>			
Tensile Strength	D638	psi	9,000
Tensile Modulus	D638	psi	850,000
Elongation	D638	%	2
Flexural Strength	D790	psi	12,000
Flexural Modulus	D790	psi	850,000
Shear Strength	D732	psi	9,000
Compressive Strength	D695, 10% Def.	psi	19,500
Compressive Modulus	D695	psi	600,000
Hardness, Rockwell	D785		M 115, R 125
Hardness, Durometer, Shore D Scale	D2240		85
Izod Impact (Notched)	D256 Type A	ft-lb/in	0.8
Coefficient of Friction, Dynamic	Dry vs. Steel, PTM55007		0.18
Limiting PV	PTM55007	psi-fpm	12,000
k (wear) factor	PTM55007	in <sup>3</sup> -min/lbft-hr	125 x 10 <sup>-10</sup>
<b>Thermal</b>			
Coefficient of Thermal Expansion	E831 (TMA)	in/in/°F	0.18 x 10E-4
Deflection Temperature, 264 psi	D648	°F	410
Tg-Glass Transition (Amorphous)	D3418	°F	428
Thermal Conductivity		BTU-in/hr-ft <sup>2</sup> -°F	2.45
Flammability, UL94			V-0
<b>Electrical</b>			
Surface Resistance	10 <sup>4</sup> - 10 <sup>6</sup> Ohm EOS/ESD S11.11	ohm/square	100,000
Dielectric Constant, 1 MHz	D150 (2)		3
Dissipation Factor, 1 MHz	D150 (2)		0.0013

*NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.*