

## Semitron® ESd 420 (Polyetherimide, static dissipative)

Semitron ESd 420 is designed for use in the semiconductor industry, where electrostatic dissipation is a requirement. It is a compression-molded material that performs at temperatures to 410 and is designed for applications currently in PEI or PES, but where protection from static discharge is required.

Property	ASTM Test Method	Units	Semitron® ESd 420
<b>Physical</b>			
Specific Gravity	D792	—	1.45
Water Absorption Immersion, 24 hr.	D570	%	0.8
Water Absorption Immersion, Sat	D570	%	2.6
<b>Mechanical</b>			
Tensile Strength	D638	psi	9,500
Tensile Modulus	D638	psi	550,000
Elongation	D638	%	2
Flexural Strength	D790	psi	14,500
Flexural Modulus	D790	psi	525,000
Shear Strength	D732	psi	7,300
Compressive Strength	D695, 10% Def.	psi	16,500
Compressive Modulus	D695	psi	350,000
Hardness, Rockwell	D785		M 87
Izod Impact (Notched)	D256 Type A	ft-lb/in	1
Coefficient of Friction, Dynamic	Dry vs. Steel, PTM55007		0.2
Limiting PV	PTM55007	psi-fpm	25,000
k (wear) factor	PTM55007	In <sup>3</sup> -min/lb-ft-hr	50 x 10 <sup>-10</sup>
<b>Thermal</b>			
Coefficient of Thermal Expansion	E831 (TMA)	in/in/°F	0.32 x 10 <sup>-4</sup>
Deflection Temperature, 264 psi	D648	°F	420
Tg-Glass Transition (Amorphous)	D3418	°F	205
Continuous Service in Air (Max), Without Load		°F	340
Thermal Conductivity		BTUin/hr-ft <sup>2</sup> -°F	1.6
Flammability, UL94			V-0
<b>Electrical</b>			
Surface Resistance	10 <sup>6</sup> - 10 <sup>9</sup> ohm; EOS/ESD S11.11	ohm/square	5 x 10 <sup>7</sup>

*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.*