

Semitron® ESd 420

Semitron ESd 420 is part of the Quadrant EPP family of products 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	Method	Unit	Value
Mechanical			
Specific Gravity, 73°F	D792		1.45
Tensile Strength, 73°F	D638	psi	9,500
Tensile Modulus of Elasticity, 73°F	D638	psi	550,000
Elongation, 73°F	D638	%	2.0
Flexural Strength, 73°F	D790	psi	14,500
Flexural Modulus, 73°F	D790	psi	525,000
Shear Strength, 73°F	D732	psi	7,300
Compressive Strength, 10% Def., 73°F	D695	psi	16,500
Compressive Modulus of Elasticity, 73°F	D695	psi	350,000
Hardness, Rockwell, Scale as noted, 73°F	D785		M87
Izod Impact (notched), 73°F	D256 Type A	ft-lb/in	1.0
Coefficient of Friction (Dry vs Steel) Dynamic	PTM55007		0.20
Limiting PV, 73°F	PTM55007	psi-fpm	25,000
k (wear) factor	PTM55010		50
Thermal			
Coefficient of linear Thermal Expansion	E-831(TMA)	in/in/°F	3.20 x 10 ⁻⁵
Deflection Temperature 264 psi	D648	°F	420
Tg-Glass Transition (amorphous)	D3418	°F	205
Continuous Service Temperature in Air (Max.)		°F	340
Thermal Conductivity		BTU-in/(hr-ft ² °F)	1.60
Electrical			
Surface Resistivity	EOS/ESD S11.11	Ohm/square	10 ⁶ - 10 ⁸

For additional information about our products call 1-800-366-0300 or via e-mail at select.support@qplas.com

All statements, technical information and recommendations contained in this publication are presented good faith, based upon tests believed to be reliable and practical field experience. The reader is cautioned, however, that Quadrant EPP cannot guarantee the accuracy or completeness of this information, and it is the customer's responsibility to determine the suitability of Quadrant EPP's products in any given application. Fluorosint, Nylatron, Ertalyte, Acetron, MC and Techtron are all registered trademarks of Quadrant EPP. Delrin and Teflon are registered trademarks of E. I. DuPont, Torlon - Solvay Advanced Polymers, Ultem-GE Plastics.

Product Data Sheet



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Property	Method	Unit	Value
Chemical			
Acids, Weak, 73°F/23°C, acetic acid, dilute hydrochloric or sulfuric			Acceptable Service
Acids, Strong, 73°F/23°C, conc. hydrochloric or sulfuric			Unacceptable
Alkalies, Weak, 73°F/23°C, dilute ammonia or sodium hydroxide			Acceptable Service
Alkalies, Strong, 73°F/23°C, conc. ammonia or sodium hydroxide			Unacceptable
Hydrocarbons-Aromatic, 73°F/23°C, benzene, toluene			Unacceptable
Hydrocarbons-Aliphatic, 73°F/23°C, gasoline, hexane, grease			Limited Service
Ketones, Esters, 73°F/23°C, acetone, methyl ethyl ketone			Unacceptable
Ethers, 73°F/23°C, diethyl ether, tetrahydrofuran			Acceptable Service
Chlorinated Solvents, 73°F/23°C, methylene chloride, chloroform			Unacceptable
Alcohols, 73°F/23°C, methanol, ethanol, anti-freeze			Acceptable Service
Inorganic Salt Solutions, 73°F/23°C, sodium chloride, potassium cyanate			Acceptable Service
Continuous Sunlight, 73°F/23°C			Acceptable Service
Miscellaneous			
Water Absorption Immersion, 24 hr	D570	%	0.80
Water Absorption Immersion, Sat.	D570	%	2.60
Ionic Impurities - Na (Sodium)	Total Digestion	ppm	510.00
Ionic Impurities - K (Potassium)	Total Digestion	ppm	3.00
Ionic Impurities - Fe (Iron)	Total Digestion	ppm	5.00
Outgassing TML (Total Mass Loss)	E595	%	1.80
CVCM (Collected Volatile Condensable Material)	E595	%	0.00
WVR(Water Vapor Regained)	E595	%	0.70
Compliance			
UL94			V-0

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