

## Semitron® ESd 410C

Semitron ESd 410C 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, static dissipative polyetherimide that performs at temperatures up to 410°F and has surface resistivity in the conductive range.

Property	Method	Unit	Value
<b>Mechanical</b>			
Specific Gravity, 73°F	D792		1.41
Tensile Strength, 73°F	D638	psi	9,000
Tensile Modulus of Elasticity, 73°F	D638	psi	850,000
Elongation, 73°F	D638	%	2.0
Flexural Strength, 73°F	D790	psi	12,000
Flexural Modulus, 73°F	D790	psi	850,000
Shear Strength, 73°F	D732	psi	9,000
Compressive Strength, 10% Def., 73°F	D695	psi	19,500
Compressive Modulus of Elasticity, 73°F	D695	psi	600,000
Hardness, Rockwell, Scale as noted, 73°F	D785		M115 (R125)
Hardness, Durometer, Shore D scale, 73°F	D2240		D85
Izod Impact (notched), 73°F	D256 Type A	ft-lb/in	0.8
Coefficient of Friction (Dry vs Steel) Dynamic	PTM55007		0.18
Limiting PV, 73°F	PTM55007	psi-fpm	12,000
k (wear) factor	PTM55010		125
<b>Thermal</b>			
Coefficient of linear Thermal Expansion	E-831(TMA)	in/in/°F	1.80 x 10 <sup>-5</sup>
Deflection Temperature 264 psi	D648	°F	410
Tg-Glass Transition (amorphous)	D3418	°F	428
Continuous Service Temperature in Air (Max.)		°F	338
Thermal Conductivity		BTU-in/(hr-ft <sup>2</sup> °F)	2.45

**For additional information about our products call 1-800-366-0300 or via e-mail at [select.support@qplas.com](mailto: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
<b>Electrical</b>			
Surface Resistivity	EOS/ESD S11.11	Ohm/square	10 <sup>4</sup> - 10 <sup>6</sup>
Dielectric Constant, 10 <sup>6</sup> Hz	D150(2)		3.00
Dissipation Factor, 10 <sup>6</sup> Hz	D150(2)		0.001
<b>Chemical</b>			
Acids, Weak, 73°F/23°C, acetic acid, dilute hydrochloric or sulfuric			Acceptable Service
Acids, Strong, 73°F/23°C, conc. hydrochloric or sulfuric			Limited Service
Alkalies, Weak, 73°F/23°C, dilute ammonia or sodium hydroxide			Acceptable Service
Alkalies, Strong, 73°F/23°C, conc. ammonia or sodium hydroxide			Acceptable Service
Hydrocarbons-Aromatic, 73°F/23°C, benzene, toluene			Acceptable Service
Hydrocarbons-Aliphatic, 73°F/23°C, gasoline, hexane, grease			Acceptable Service
Ketones, Esters, 73°F/23°C, acetone, methyl ethyl ketone			Acceptable Service
Ethers, 73°F/23°C, diethyl ether, tetrahydrofuran			Acceptable Service
Chlorinated Solvents, 73°F/23°C, methylene chloride, chloroform			Acceptable Service
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			Limited Service
<b>Miscellaneous</b>			
Water Absorption Immersion, 24 hr	D570	%	0.01
Water Absorption Immersion, Sat.	D570	%	0.03
Ionic Impurities - Na (Sodium)	Total Digestion	ppm	300.00
Ionic Impurities - K (Potassium)	Total Digestion	ppm	1.30
Ionic Impurities - Fe (Iron)	Total Digestion	ppm	15.30
Outgassing TML (Total Mass Loss)	E595	%	0.50
CVCM (Collected Volatile Condensable Material)	E595	%	0.00
WVR(Water Vapor Regained)	E595	%	0.20
<b>Compliance</b>			
UL94			V-0

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