



Semikon - 48 - ESD

Typical
Data Sheet
5/12/17

Semikon - 48 - ESD is a static dissipative Polyetheretherketone (PEEK) polymer product designed for static management applications requiring higher thermal performance in an ESD product up to 450-475F. Product maintains strength and stiffness, and prevents discharge to or from human contact during assembly and packaging operations. Semikon-48-ESD is a compression molded, and fully annealed PEEK product offering high degree of dimensional stability during and after machining of intricate components. The product is available in rod, tube and plate.

	Properties	Metric	English	Test Method
Physical	Specific Gravity	1.47 g/cc	0.053 lb/in ³	ASTM D-792
	Water Absorption			
	24 hours	0.20%	0.20%	ASTM D-570
	At Saturation	1.80%	1.80%	ASTM D-570
Mechanical	Tensile Strength, Ultimate	105 MPa	15,000 psi	ASTM D-638
	Tensile Modulus	6.5 GPa	950 ksi	ASTM D-638
	Elongation at Break	1.70%	1.70%	ASTM D-638
	Flexural Strength	150 MPa	22,000 psi	ASTM D-790
	Flexural Modulus	7.0 GPa	1,200 ksi	ASTM D-790
	Compressive Strength	190 MPa	27,000 psi	10% Def. ; ASTM D-695
	Compressive Modulus	4.0 GPa	580 ksi	ASTM D-695
	Izod Impact, Notched	0.55 J/cm	1.2 ft-lb/in	ASTM D-256 Type A
	Coefficient of Friction	0.2	0.2	Dry vs. Steel, QTM 55007
	Hardness, Rockwell M	105	105	ASTM D-785
Hardness, Rockwell R	120	120	ASTM D-785	
Electrical	Surface Resistivity per Square	1e+006 – 1e+009 ohms	1e+006 – 1e+009 ohms	ANSI/EOS/ESD S11.11
	Dissipation Factor 10 ⁶ Hz	0.518	0.518	
	Dielectric Constant 10 ⁶ Hz	10.9	10.9	
Thermal	CTE, Linear 68°F	30.0 µm/-°C	1.6x10 ⁻⁵ in/in-°F	(-40°F to 300°F) ASTM E381
	Max Service Temperature, Air	246 °C	475 °F	Long Term
	Deflection Temperature at 1.8 Mpa (264psi)	260 °C	500 °F	ASTM D-648
	Melt Point	340 °C	644 °F	ASTM D-3418
	Flammability, UL94 (Estimated Rating)	V-0	V-0	1/8 in
Chemical Resistance	Acids, Strong (pH1-3)	Limited	Limited	
	Acids, Weak	Acceptable	Acceptable	
	Alcohols	Acceptable	Acceptable	
	Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
	Alkalies, Weak	Acceptable	Acceptable	
	Chlorinated Solvents	Acceptable	Acceptable	
	Conductive / Static Dissipative	Yes	Yes	
	Continuous Sunlight	Acceptable	Acceptable	
	Hot Water / Steam	Acceptable	Acceptable	
	Hydrocarbons - Aliphatic	Acceptable	Acceptable	

To be best of our knowledge the information contained herein is accurate. However, neither Symmtek Polymers LLC, nor its affiliates assumes

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