



Semikon - 41 - ESD-CON

Typical
Data Sheet
5/12/17

Semikon 41-ESD-CON is a Polyetherimide (PEI) polymer product designed for use in the semiconductor industry and a pseudo-conductive material. Product offers consistent surface resistivity with no or very low initial charge through a wide range of temperatures up to 340F providing a path for an electrostatic charge to bleed-off. Semikon 41-ESD-CON is a compression molded, and fully annealed 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	1.41 g/cc	0.0509 lb/in ³	ASTM D-792
	Water Absorption			
	24 hours	0.30%	0.30%	ASTM D-570
	At Saturation	1.10%	1.10%	ASTM D-570
Mechanical	Tensile Strength, Ultimate	63 MPa	9,500 psi	ASTM D-638
	Tensile Modulus	5.80 GPa	900 ksi	ASTM D-638
	Elongation at Break	2.50%	2.50%	ASTM D-638
	Flexural Strength	83 GPa	12,600 psi	ASTM D-790
	Flexural Modulus	5.80 GPa	900 ksi	ASTM D-790
	Compressive Strength	140 MPa	20,000 psi	10% Def. ; ASTM D-695
	Compressive Modulus	4.0 GPa	580 ksi	ASTM D-695
	Izod Impact, Notched	0.5 J/cm	0.9 ft-lb/in	ASTM D-256 Type A
	Coefficient of Friction	0.2	0.2	Dry vs. Steel, QTM 55007
	Hardness, Rockwell M	115	115	ASTM D-785
	Hardness, Rockwell R	125	125	ASTM D-785
Electrical	Surface Resistivity per Square	1.00e+005 ohms	1.00e+005 ohms	ANSI/EOS/ESD S11.11
	Dissipation Factor 10 ⁶ Hz	0.001	0.001	ASTM D-150
	Dielectric Constant 10 ⁶ Hz	3	3	ASTM D-149
Thermal	CTE, Linear 68°F	33.4 µm/-°C	1.9x10 ⁻⁵ in/in-°F	(-40°F to 300°F) ASTM E381
	Max Service Temperature, Air	170 °C	338 °F	Long Term
	Deflection Temperature at 1.8 Mpa (264psi)	210 °C	410 °F	ASTM D-648
	Glass Transition Temperature	210 °C	410 °F	ASTM D-3418
	Flammability, UL94 (Estimated Rating)	V-0	V-0	1/8 in
Chemical Resistance	Alcohols	Acceptable	Acceptable	
	Hydrocarbons - Aliphatic	Limited	Limited	
	Hydrocarbons - Aromatic	Unacceptable	Unacceptable	
	Chlorinated Solvents	Unacceptable	Unacceptable	
	Ethers	Acceptable	Acceptable	
	Ketones	Unacceptable	Unacceptable	
	Strong Acids	Unacceptable	Unacceptable	
	Strong Alkalies	Unacceptable	Unacceptable	
	Continuous Sunlight	Acceptable	Acceptable	
	Acids, Weak	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable		

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