



**Semitron® ESd 500HR** PTFE, mica-filled, static dissipative, compression molded

Reinforced with a proprietary synthetic mica, Semitron® ESd 500HR offers an excellent combination of low frictional properties and dimensional stability. Semitron® ESd 500HR should be considered whenever Teflon® PTFE is used. It is ideal for applications where controlled bleed off of static charges is critical. It is white in color.

- Surface resistivity:  $10^{10} - 10^{12}$  /sq
- Thermal performance to 500°F (260°C)
- Thermal insulative
- Very low coefficient of friction

Compression	Rod	Disc	Plate	Tubular Bar	Other
Semitron® ESd 500 HR PTFE	-	-	.250"- 2.0" (C)	-	-

Key: C = 12" wide x 12" long

MECHANICAL PROPERTIES	VALUES	ASTM/COMMENTS
Specific Gravity	2.3	D792
Tensile Strength, psi	1500	D638
Tensile Modulus, psi	250000	D638
Elongation, %	50	D638
Flexural Strength, psi	2200	D790
Flexural Modulus, psi	350000	D790
Shear Strength, psi	1700	D732
Compressive Strength, psi	3800	D695, 10% Def.
Compressive Modulus, psi	225000	D695
Hardness, Rockwell R	50	D785
Izod Impact (Notched), ft-lb/in	1	D256 Type A
Coefficient of Friction, Dynamic	0.1	Dry vs. Steel, PTM55007
Limiting PV, psi-fpm	6000	PTM55010
k (wear) factor, 10-10in3-min/lb-ft-hr	30	PTM55010
THERMAL PROPERTIES		
Coefficient of Thermal Expansion, 10E-4/°F	.55	E831 (TMA)
Deflection Temperature 264 psi, °F	210	D648
Melting Point (Crystalline) Peak, °F	621	D3418
Continuous Service in Air (Max), °F	500	Without Load
ELECTRICAL PROPERTIES		
Volume Resistivity, Ohm-cm	1E+11	1E+10 to 1E+12 Ohm-cm; D257
CHEMICAL PROPERTIES		
Water Absorption Immersion, 24 hr., %	0.03	24 hour immersion
Water Absorption Immersion Sat, %	2	saturation immersion
Acids, Weak (acetic, dilute HCl)	3	Acceptable Service
Acids, Strong (conc. HCl or sulfuric)	3	Acceptable Service
Alkalies, Weak (dilute NaOH)	2	Limited Service
Alkalies, Strong (conc. NaOH)	1	Unacceptable
Hydrocarbons, Aromatic (toluene)	3	Acceptable Service
Hydrocarbons, Aliphatic (gasoline)	3	Acceptable Service
Ketones, Esters (acetone)	3	Acceptable Service
Ethers (diethyl ether, THF)	3	Acceptable Service
Chlorinated Solvents (methylene chloride)	3	Acceptable Service
Alcohols (methanol, anti-freeze)	3	Acceptable Service
Inorganic Salt Solutions (NaCl, KCl)	3	Acceptable Service
Continuous Sunlight	3	Acceptable Service
Steam	3	Acceptable Service
COMPLIANCE		
Flammability, UL94 (5=V-0; 4=V-1; 3=V-2; 1=HB)	5 (V-0)	V-0 UL94
FDA (1=Yes)	0 Not Compliant	USDA (1=Yes) 0 Not Compliant
NSF (1=Yes)	0 Not Compliant	3A-Dairy (1=Yes) 0 Not Compliant
Canada AG (1=Yes)	0 Not Compliant	USP Class VI (1=Yes) 0 Not Compliant