

TYPICAL PROPERTIES OF SULFONE POLYMERS

ASTM Test	Property	Poly-sulfone	Polyaryl-sulfone	Polyether-sulfone
PHYSICAL				
D792	Specific gravity	1.24	1.37	1.37
D570	Water absorption, 24 h, 1/8-in thk (%)	0.3	0.40	0.43
MECHANICAL				
D638	Tensile strength (psi)	10,200	12,000	12,200
D638	Elongation at break (%)	50-100	40	40-80
D638	Tensile modulus (10⁵ psi)	3.6	3.9	3.9
D790	Flexural strength (psi)	15,400	16,100	18,650
D790	Flexural modulus (10⁵ psi)	3.9	4.0	3.8
D256	Impact strength, Izod (ft-lb/in of notch)	1.3	1.6	1.6
D785	Hardness, Rockwell M	69	85	88
THERMAL				
C177	Thermal conductivity (10⁴ cal-cm/sec-cm²-°C)	6.2	—	3.2-4.4
D696	Coefficient of thermal expansion (10⁻⁵ in/in-°F)	3.1	2.7	3.1
D648	Deflection temperature (°F) At 264 psi	345	400	398
D2863	Oxygen index rating	30	33	34-38
ELECTRICAL				
D149	Dielectric strength (V/mil) Short time, 1/8-in thk	425	383	400
D150	Dielectric constant At 60 Hz to 1 MHz	3.07-3.13	3.51-3.54	3.5
D150	Dissipation factor At 60 Hz to 1 MHz	0.0008-0.0034	0.00171-0.00564	0.001-0.0035
D257	Volume resistivity (ohm-cm)	5×10 ¹⁶	7.71×10 ¹⁶	10 ¹⁷ -10 ¹⁸

These products are available from