



POLYSULFONE - PSU1000

Characteristics

- * Broad Temperature Range Capability - Hot Water and Steam Performance to 300° F (150 C)
- * Good Thermal and Electrical Insulation Characteristics
- * Hydrolysis Resistant
- * Radiation Stability
- * Low Ionic Impurity

Description

PSU 1000 Polysulfone is an amber semi-transparent, heat resistant, high performance engineering thermoplastic. It offers excellent mechanical, electrical and improved chemical resistance properties relative to polycarbonate. Polysulfone's properties remain relatively consistent over a broad temperature range, from -150° to 300° F (-100° to 150° C).

PSU Polysulfone offers high chemical resistance to acidic and salt solutions, and good resistance to detergents, hot water and steam. In addition, polysulfone has excellent radiation stability and offers low ionic impurity levels. PSU 1000 Polysulfone often replaces polycarbonate when higher temperatures, improved chemical resistance or autoclavability is required. It is commonly used for analytical instrumentation, medical devices and semiconductor process equipment components.

Forms Available

- ROD .250 to 6.00 " diameter, Lengths to 12 feet
- TUBE Custom produced as requested
- PLATE .250" to 3.000" thick, Widths to 24", Lengths to 48"
- COLOR Amber

Typical Property Values

MECHANICAL @ 73°F

Specific Gravity	
Tensile Strength	psi
Tensile Modulus of Elasticity	psi
Tensile Elongation (at Break)	%
Flexural Strength	psi
Flexural Modulus of Elasticity	psi
Shear Strength	psi
Compressive Strength, 10% Deformation	psi
Compressive Modulus of Elasticity	psi
Rockwell Hardness	M Scale
Izod Impact Strength, Notched	ft-lbs/in. of notch
Coefficient of Friction, Dynamic (Dry vs. Steel)	
Limiting PV (4 :1 Safety Factor Applied)	ft.lbs/in. ² min
Wear Factor	in ³ -min/ft.lbs. hr.
Water Absorption 24 hrs	% by wt.

THERMAL

Coefficient of Linear Expansion (-40°F to 300°F)	in./in./°F
Heat Deflection Temperature @264 psi	°F
Tg-Glass Transition (amorphus)	°F
Continuous Service Temperature in Air	°F
Thermal Conductivity	°F

ELECTRICAL

Dielectric Strength, Short Term	Volts/mil
Surface Resistivity	Ohms/Sq.
Dielectric Constant	1 MHz
Dissipation Factor	1 MHz

Polysulfone PSU-1000

1.24
10,200
390,000
30
15,000
400,000
9,000
13,000
375,000
82
1.30
0.30
3.1 x 10 ⁻⁵
340
374
300
1.80
425
>10 ¹³
3.14
0.0008

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control)