



Ryton® PPS

Characteristics

- * Excellent Chemical Resistance
- * Essentially Zero Moisture Absorption
- * Machines to Tight Tolerances
- * Excels in Corrosive Environments to 392° F
- * Very Low Coefficient of Linear Thermal Expansion

Description

Ryton PPS (polyphenylene sulfide) products offer the broadest resistance to chemicals of any advanced engineering plastic. They have no known solvents below 392° F (200° C) and offer inertness to steam, strong bases, fuels, and acids. Minimal moisture absorption and very low coefficient of linear thermal expansion, combined with a proprietary stress relieving process, makes these PPS products ideally suited for precise tolerance machined components.

40% Glass Reinforced Ryton offers better dimensional stability and thermal performance than the unfilled grade.

Forms Available

ROD	.250 to 5.00 " diameter, Lengths to 12 feet
TUBE	Custom produced as requested
PLATE	.250" to 2.000" thick, Widths to 24", Lengths to 48"
COLOR	Off White

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
Melting Point (Crystalline)	°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

Ryton® 40% Glass Filled

13,000
730,000
2
23,000
1,000,000
psi
24,000
1,300,000
94
1.00
0.02
2.5 x 10 ⁻⁵
490
°F
450
2.10
385

Ryton® Bearing Grade

10,000
800,000
2
15,000
1,000,000
psi
15,000
800,000
93
1.00
0.02
1.2 x 10 ⁻⁵
490
°F
450
2.20

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control , Ryton is a registered Trademark of Chevron Phillips)