



DURATRON®

Characteristics

- * Superior Chemical Resistance
- * Easy to Machine
- * Low Moisture Absorption
- * Dimensionally Stable
- * High Strength and Stiffness - Good Wear and Abrasion Properties

Description

Duratron XP is a compression-molded polyimide that offers high purity, high strength, high heat resistance, and good machinability. These properties, combined with its chemical resistance and dimensional stability, make Duratron XP ideal for components in semiconductor manufacturing and test equipment. Known for low outgassing and ionic impurities it serves as an ideal material for plasma etching chamber parts.

Forms Available

ROD .375 to 1.500" diameter, (Duratron 150 up to 8" dia.)
 BUSHING 1.5" - 12.5" OD, .750" - 11.25" ID
 PLATE .375" to 2.000" thick, Widths to 12", Lengths to 24"
 COLOR Yellow

Typical Property Values

MECHANICAL @ 73°F

		Duratron® XP
Specific Gravity		1.40
Tensile Strength	psi	16,000
Tensile Modulus of Elasticity	psi	583,000
Tensile Elongation (at Break)	%	4
Flexural Strength	psi	20,000
Flexural Modulus of Elasticity	psi	600,000
Shear Strength	psi	
Compressive Strength, 10% Deformation	psi	24,000
Compressive Modulus of Elasticity	psi	450,000
Rockwell Hardness	M Scale	110
Izod Impact Strength, Notched	ft-lbs/in. of notch	1.40
Coefficient of Friction, Dynamic (Dry vs. Steel)		0.23
Limiting PV (4 :1 Safety Factor Applied)	ft.lbs/in. ² min	32,500
Wear Factor	in ³ -min/ft.lbs. hr.	50
Water Absorption 24 hrs	% by wt.	0.40

THERMAL

Coefficient of Linear Expansion (-40°F to 300°F)	in./in./°F	0.27
Heat Deflection Temperature @264 psi	°F	680
Melting Point (Crystalline)	°F	613
Continuous Service Temperature in Air	°F	580
Thermal Conductivity	°F	1.53

ELECTRICAL

Dielectric Strength, Short Term	Volts/mil	700
Surface Resistivity	Ohms/Sq.	>10 ¹³
Dielectric Constant	1 MHz	3.41
Dissipation Factor	1 MHz	0.0038

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control , Duratron is a registered Trademark on Quadrant EPP)