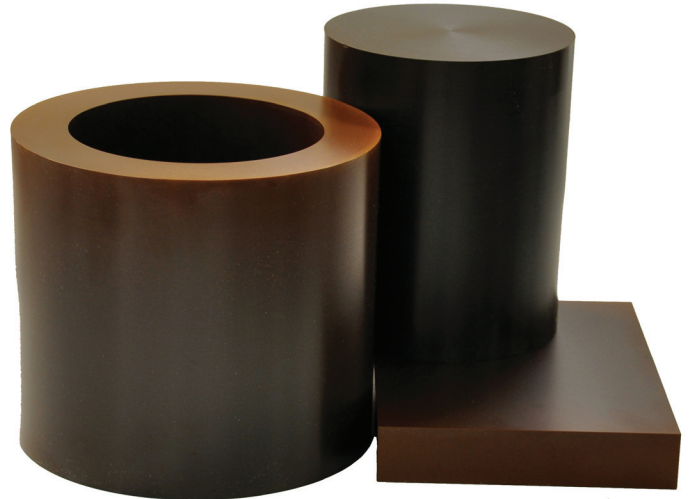
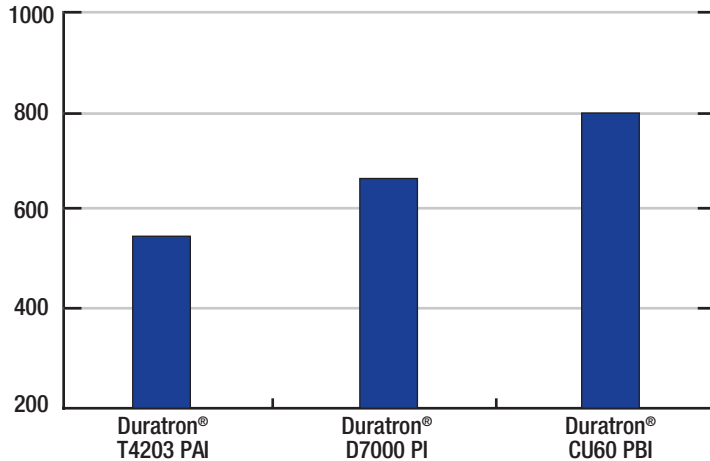


Machinable Polyimide
Thermal Resistance Over 600°F

**SIMPLY NO
SUBSTITUTE**

Duratron® D7000 PI

A Perfect Fit
(Heat Deflection Temperature- 264psi)



Competitive Advantage

• Quadrant Duratron® D7000 series machinable polyimide fits perfectly in the Quadrant performance portfolio. It is an exceptional value for applications where thermal requirements exclude Quadrant Duratron® PAI and do not require the extraordinary thermal resistance of Quadrant Duratron® PBI. Quadrant Duratron® PI is available in several grades for structural and wear applications and in the broadest range of shapes - particularly thick sheets, larger sheet geometries and heavy-wall tubes.

• Quadrant Duratron® PI machinable shapes are ideal starting points for designs that reduce weight, extend length of service before maintenance or replacement and reduce overall cost by increasing process uptime. Quadrant Duratron® PI materials are just one of the solutions in the machinable plastics industry's broadest product line.

Key Benefits

- Good performance at elevated temperature (>600°F)
- Good chemical resistance
- Easily machined from a broad range of shapes
 - rod, sheet, tubular forms
- High strength, tough and dimensionally stable

Common Applications

- Valve and pump seats, seals, and wear surfaces
- Structural and wear parts for semiconductor and electronics manufacturing
- Fixtures and handling parts for glass and plastics manufacturing
- Metal replacement for aerospace components
 - lightweight, lubrication-free



QUADRANT

Data Sheet - Duratron® D7000 PI

	Property	Units	Test Method	Typical Average Value
Mechanical Properties	Specific Gravity @ 73°F	-	ASTM D792	1.37
	Ultimate Tensile Strength	psi	ASTM D638	17,500
	Tensile Modulus	psi	ASTM D638	540,000
	Elongation, at break	%	ASTM D638	6
	Flexural Strength	psi	ASTM D790	25,000
	Flexural Modulus of Elasticity	psi	ASTM D790	550,000
	Shear Strength	psi	ASTM D732	16,000
	Compressive Strength @ 10% Deformation	psi	ASTM D695	27,000
	Compressive Modulus	psi	ASTM D695	380,000
	Hardness, Rockwell	-	ASTM D785	R128
	Hardness, Durometer, Shore "D" Scale	-	ASTM D2240	90
	Notched Izod Impact (1/8")	ft. lb./in. of notch	ASTM D256	1.0
	Coefficient of Friction - Dynamic (unlub.)	-	QTM 55007	0.29
	Limiting PV with 4:1 safety factor applied	ft. lbs./in. ² -min.	QTM 55007	15,000
	Wear Factor x 10-10, at 50 psi x 100 fpm	in ³ -min./ft. lbs. hr	QTM 55010	150
Thermal Properties	Coefficient of Linear Thermal Expansion (-40°F to 300°F)	in./in./°F	ASTM E831	2.25 x 10 ⁻⁵
	Deflection Temperature @ 264 psi	°F	ASTM D648	670
	Tg-Glass Transition (amorphous)	°F	ASTM D3418	690
	Melting Point (crystalline) peak	°F	ASTM D3418	N/A
	Continuous Use Temperature (1)	°F	-	500
	Thermal Conductivity	BTU in./(hr. ft. ² °F)	ASTM E1530	1.50
Electrical Properties	Dielectric Strength	Volts/mil	ASTM D149	395
	Surface Resistivity	ohms/square	EOS/ESD S11.11	>10 ¹³
	Dielectric Constant, 106 Hz	-	ASTM D150	3.2
	Dissipation Factor, 106 Hz	-	ASTM D150	0.005
	Flammability @ 3.1mm (1/8 in.) ⁽²⁾	-	UL94	V-0
Other	Water Absorption Immersion, 24 Hours @ 73° F	% by wt.	ASTM D570 ⁽²⁾	0.7
	Absorption Immersion, Saturation @ 73° F ⁽²⁾	% by wt.	ASTM D570 ⁽²⁾	3.8

(1) Data represents Quadrant's estimated maximum long-term service temperature based on practical field experience.

(2) Specimens: 1/8" thick x 2" diameter or square.

(3) Estimated rating based on available data. The UL-94 Test is a laboratory test and does not relate to actual fire hazard.

All statements, technical information and recommendations contained in this publication are presented in good faith, based upon tests believed to be reliable and practical field experience. The reader is cautioned, however, that Quadrant Engineering Plastic Products does not guarantee the accuracy or completeness of this information and it is the customer's responsibility to determine the suitability of Quadrant's products in any given application.

Acetron, Duraspin, Duratron, Erta, Ertacetal, Ertalene, Ertalon, Ertalyte, Extreme Materials, Fluorosint, Ketron, MC, Monocast, Novatron, Nylatrack, Nylatron, Polypenco, Proteus, Sanalite, Semitron, Symalit, Techtron, TIVAR, Ultrawear and Vibratuf are registered trademarks of the Quadrant group of companies.

Distributed by:

