Duratron® T4203 (EXTRUSION)

Polyamide-imide

Quadrant Engineering Plastic Products

Message:

Duratron® T4203 extruded PAI offers excellent compressive strength and the highest elongation of the Duratron® PAI grades. It also provides electrical insulation and exceptional impact strength. This grade is commonly used for electrical connectors and insulators due to its high dielectric strength.
Duratron® PAI is the highest performing melt processable plastic. It has superior resistance to elevated temperatures. It is capable of performing under severe stress conditions at continuous temperatures to 500°F (260°C). Parts machined from Duratron® PAI stock shapes provide greater compressive strength and higher impact resistance than most advanced engineering plastics. Its extremely low coefficient of linear thermal expansion and high creep resistance deliver excellent dimensional stability over its entire use range. Duratron® is an amorphous material with a Tg (glass transition temperature) of 537°F (280°C).
Quadrant EPP's extruded Duratron® stock shapes are post-cured using the latest technology and procedures developed jointly by Amoco Performance Products and Quadrant eliminating the need for additional curing by the end user in most situations. A post-curing cycle is recommended for components fabricated from extruded shapes where optimization of chemical resistance and/or wear performance is required.
Data provided by Quadrant Engineering Plastic Products from tests on stock shapes and parts produced by Quadrant EPP.

General Information	
Features	Acid Resistant
	Alcohol Resistant
	Alkali Resistant
	Amorphous
	Electrically Insulating
	Good Chemical Resistance
	Good Compressive Strength
	Good Creep Resistance
	Good Stiffness
	Good Thermal Stability
	Good Wear Resistance
	High Strength
	Hydrocarbon Resistant
	Low Friction
	Solvent Resistant
Uses	Bearings
	Bushings
	Electrical Parts
	Pump Parts
	Sealing Devices
	Seals
Forms	Customizable Forms
	Preformed Parts
	Profiles

	Rod		
	Sheet		
	Tubing		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.41	g/cm³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.40	%	
Saturation	1.7	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
E-Scale	80		
M-Scale	120		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	4140	MPa	ASTM D638
Tensile Strength (Ultimate)	138	MPa	ASTM D638
Tensile Elongation (Break)	10	%	ASTM D638
Flexural Modulus	4140	MPa	ASTM D790
Flexural Strength (Yield)	165	MPa	ASTM D790
Compressive Modulus	3300	MPa	ASTM D695
Compressive Strength (10% Strain)	165	MPa	ASTM D695
Shear Strength	110	MPa	ASTM D732
Coefficient of Friction (vs. Steel - Static)	0.35		Internal Method
Wear Factor	> 2000	10^-8 mm³/N·m	ASTM D3702
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	110	J/m	ASTM D256A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	278	°C	ASTM D648
Maximum Use Temperature - Long Term, Air	260	°C	
Limiting Pressure Velocity [1]	0.140	MPa·m/s	Internal Method
Glass Transition Temperature	275	°C	ASTM D3418
CLTE - Flow [2] (-40 to 149°C)	3.1E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.26	W/m/K	ASTM F433
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity [3]	> 1.0E+16	ohms	Internal Method
Dielectric Strength [4]	23	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	4.20		ASTM D150
Dissipation Factor (1 MHz)	0.026		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (3.18 mm, Estimated Rating)	V-0		UL 94

NOTE	
1.	4:1 safety factor
2.	68°F
3.	EOS/ESD S11.11
4.	Method A (Short-Time)

Recommended distributors for this material

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