Duratron® U2300

Polyether Imide

Quadrant Engineering Plastic Products

Message:

Duratron® U2300 is an extruded 30% glass reinforced polyetherimide. It is an amorphous, high-performance polymer with exceptional flame and heat resistance. It performs continuously to 340°F (171°C), making it ideal for high strength/high heat applications, and those requiring consistent dielectric properties over a wide frequency range. It is hydrolysis resistant, highly resistant to acidic solutions and capable of withstanding multiple autoclaving cycles.

Duratron® U2300 provides greater rigidity and improved dimensional stability while maintaining many of the useful characteristics of unfilled Duratron® PEI. Duratron® PEI commonly is machined into parts for reusable medical devices, analytical instrumentation, electrical/electronic insulators and a variety of structural components requiring high strength and rigidity at elevated temperatures.

Data provided by Quadrant Engineering Plastic Products from tests on stock shapes and parts produced by Quadrant EPP.

General Information	
Filler / Reinforcement	Glass Fiber,30% Filler by Weight
Features	Acid Resistant
	Alcohol Resistant
	Amorphous
	Autoclavable
	Flame Retardant
	Good Dimensional Stability
	High Heat Resistance
	High Rigidity
	High Strength
	Hydrolysis Resistant
Uses	Electrical/Electronic Applications
	Insulation
	Medical/Healthcare Applications
	Structural Parts
Processing Method	Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.51	g/cm³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.18	%	
Saturation	0.90	%	

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	114		
R-Scale	127		
Durometer Hardness (Shore D)	86		ASTM D2240

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	5520	MPa	ASTM D638
Tensile Strength (Ultimate)	117	MPa	ASTM D638
Tensile Elongation (Break)	3.0	%	ASTM D638
Flexural Modulus	5860	MPa	ASTM D790
Flexural Strength (Yield)	186	MPa	ASTM D790
Compressive Modulus	4310	MPa	ASTM D695
Compressive Strength (10% Strain)	221	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	53	J/m	ASTM D256A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	210	°C	ASTM D648
Maximum Use Temperature - Long Term, Air	171	°C	
Glass Transition Temperature	210	°C	ASTM D3418
CLTE - Flow [1] (-40 to 149°C)	2.0E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.23	W/m/K	ASTM F433
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity [2]	> 1.0E+13	ohms	Internal Method
Dielectric Strength [3]	30	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.70		ASTM D150
Dissipation Factor (1 MHz)	1.5E-3		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (3.18 mm, Estimated Rating)	V-0		UL 94
NOTE			
1.	68°F		
2.	EOS/ESD S11.11		
3.	Method A (Short-Time)		

Recommended distributors for this material

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