



** CELAZOLE® is the registered trademark of

QUADRANT

PRODUCT CAPABILITIES:

- Rod : 1/4" - 2"
- Heavy gauge Sheet : 1/4" - 2"

ADVANTAGES:

- Celazole® PBI Is The Highest Performing Engineering Plastic Currently Available
- Offers The Highest Heat Resistance (It Does Not Melt) And Mechanical Property Retention Over 400°F (205°C) of Any Unfilled Plastic
- Good Wear Resistance And Load Carrying Capabilities At Extreme Temperatures Than Any Other Reinforced Or Unreinforced Engineering Plastic

PRODUCT COLORS:

- Black

APPLICATIONS INCLUDE:

- Wafer Retaining Rings For Gas Plasma Etching
- Vacuum Tips
- Wafer Carriers
- Contact Seals
- Insulator Bushings
- Thermal Isolators
- Guide Rollers

GENERAL PROPERTIES	ASTM or UL Test	CELAZOLE® PBI Typical Values
PHYSICAL		
Specific Gravity (g/cm ³)	D792	1.3
Water Absorption, 24 hrs (%)	D570	0.4
MECHANICAL		
Tensile Strength (psi)	D638	20,000
Tensile Modulus (psi)	D638	850,000
Tensile Elongation at Break (%)	D638	3
Flexural Strength (psi)	D790	32,000
Flexural Modulus (psi)	D790	950,000
Compressive Strength (psi)	D695	50,000
Compressive Modulus (psi)	D695	900,000
Hardness Rockwell	D785	M125
IZOD Notched Impact (ft-lb/in)	D256	0.5
THERMAL		
Coeff. of Thermal Expansion (x 10 ⁻⁵ in./in./°F)	E831	1.3
Heat Deflection Temp (°F / °C) @ 264 psi	D648	800 / 427
Glass Transition Temp (°F / °C)	D3418	750 / 399
Max Operating Temp (°F / °C)	-	600 / 316
Thermal Conductivity (BTU-in/ft ² -hr-°F)	F433	2.8
Flammability Rating	UL-94	V-0
ELECTRICAL		
Dielectric Strength (V/mil) short time	D149	550
Dielectric Constant at 1 MHz	D150	3.2
Dissipation Factor at 1 MHz	D150	0.003
Surface Resistivity (ohm/sq) at 50% RH	EOS/ESD S11.11	> 10 ¹³

NOTE: The information contained here in is typical values intended for reference only. They should NOT be used as a basis for design specifications or quality control.