Celazole® PBI U-60

HIGHER-PERFORMANCE CONTACT PART MATERIALS FOR SENSITIVE GLASS HANDLING NEEDS

Celazole PBI (polybenzimidazole) is a high strength, highly stable linear hetrocyclic polymer.

Broadly resistant to hydrocarbons, alcohols, weak acids, weak bases, hydrogen sulfide, chlorinated solvents, oils, heat transfer fluids and many other organic chemicals, it can be used in air up to 315°C (600°F) and up to 375°C (700°F) in vacuum and inert environments.

EXTREME HIGH TEMPERATURE RESISTANCE: 425° C glass temperature (Tg)

- Will not melt at ambient pressure
- Glass transition temperature of 800°F (427°C) means stability at high temperatures
- Will not scratch glass
- Mohs Hardness of 3 cannot scratch glass with Mohs Hardness 7
- Used in technical glass manufacturing – glass contact applications for this reason
- Excellent wear resistance
- The highest compressive strength of any unfilled plastic
- Excellent thermal and electrical insulator
- Machinable into intricate parts
- Available in electrostatic discharge grade (ESD) to alleviate arc tracking when electrical charges are present

APPLICATIONS:

Glass panel guides, clamps, lifting pins, insulating contacts, etc. – in 600F (315°C) environments

Glass handling, conveying, LCD panel sputtering, chemical vapor deposition (CVD) and physical vapor deposition (PVD) processes

COMPARISONS:

2x

Twice the strength of a Polyimide

≤

Less brittle than ceramic or quartz

✕

Won't scratch glass like ceramics

PBI Performance Products, Inc.
9800 Southern Pine Blvd. Suite D, Charlotte, NC 28273
T: 704-554-3378 F: 704-554-3101
www.pbiproducts.com

PBI CELAZOLE U-60 **PROPERTIES**

	ASTM METHOD	ENGLISH VALUE	METRIC VALUE
COMPRESSIVE STRENGTH (YIELD)	D-695	57 kpsi	390 MPa
MODULUS	D-695	850 kpsi	5,900 MPa
HEAT DEFLECTION TEMP. (264 psi; 1.8 MPa)	D-648	815°F	435°C
GLASS TRANSITION	DMA	800°F	427°C
CLTE 75-300°F (25-150°C)	TMA	13 x 10^{-6} in/in°F	23 µm/m°C
THERMAL CONDUCTIVITY 77°F (25°C)		2.8 Btu-in/hr-ft^2°F	0.41 W/m°C
DIELECTRIC STRENGTH	D-149	580 V/mil	23 KV/mm
VOLUME RESISTIVITY	D-257	2 x 10^{15} ohm-cm	2 x 10^{15} ohm-cn
ARC RESISTANCE	D-495	185 sec.	185 sec.
COEF. OF FRICTION, STATIC VS STEEL		0.15	0.15

For more information, contact:

Debra Robinson
Inside Sales Manager

(704) 554-2744

PBI Performance Products, Inc
9800-D Southern Pine Boulevard
Charlotte, NC 28273
E-mail: debra.robinson@pbiproducts.com
celazolePBI.com

PBI® PERFORMANCE PRODUCTS, INC.
A member of The Inter Tech Group, Inc.