



Celazole[®] TL-60

Self Lubricating Melt Processable PBI

Typical Properties

PROPERTIES	ASTM METHOD	ENGLISH VALUE	METRIC VALUE
MECHANICAL			
Tensile Strength	D-638	16 kpsi	110 MPa
Modulus		2600 kpsi	18,000 MPa
Elongation		0.9%	0.9%
Flexural Strength	D-790	23 kpsi	158 MPa
Modulus		1900 kpsi	13,000 MPa
Compressive Strength	D-695	18 kpsi	123 MPa
Modulus		740 kpsi	5100 MPa
TRIBOLOGICAL *			
Wear Rate		0.20 in/1000 hrs	5 mm/1000 hrs
Running Temperature		350°F	177°C
Static Coefficient of Friction		0.30	0.30
Dynamic Coefficient of Friction		0.05	0.05
Maximum Limiting PV		225,000	N/A
THERMAL			
Coefficient of Linear Thermal Expansion			
75-300°F	TMA	14 X 10 ⁻⁶ in/in°F	26µm/m°C
Heat Capacity @ 158°F	DSC	0.28 Btu/lb°F	1160 J/kg°C
Heat Deflection Temperature	D-648	590°F	310°C
Temp. of Initial (5%) Weight Loss In:			
Air	TGA	1116°F	602°C
Nitrogen	TGA	1123°F	606°C
Thermal Conductivity @ 70°F	F-433	5.3 Btu in/hr•ft ² °F	0.76 W/M°C
OTHER			
Specific Gravity		1.43	1.43
Hardness, Rockwell A	D-785	24	24
Poisson's Ratio		0.42	0.42
Water Absorption	D-570		
24 hours @ 73°F		0.20 %	0.20 %
@ Equilibrium		3.8 %	3.8 %

***Test Conditions**

Mating Material – 1018 Steel

Pressure – 125 psi

Velocity – 800 ft/min

Surface Finish – 16 rms