

# Celazole® TL-60

## Self Lubricating Melt Processable PBI

### Typical Properties

PROPERTIES	ASTM METHOD	ENGLISH VALUE	METRIC VALUE
<b>MECHANICAL</b>			
Tensile Strength	D-638	17.4 kpsi	120 MPa
Modulus		2650 kpsi	18,300 MPa
Elongation		0.9%	0.9%
Flexural Strength	D-790	27.6 kpsi	190 MPa
Modulus		2320 kpsi	16,000 MPa
Compressive Strength	D-695	18 kpsi	123 MPa
Modulus		740 kpsi	5100 MPa
<b>TRIBOLOGICAL *</b>			
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
<b>THERMAL</b>			
Coefficient of Linear Thermal Expansion			
75-300°F	TMA	14 X 10 <sup>-6</sup> 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 <sup>2</sup> °F	0.76 W/M°C
<b>OTHER</b>			
Specific Gravity		1.44	1.44
Hardness, Rockwell E	D-785	65	65
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

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