Celazole® TU-60 Unreinforced Melt Processable Polybenzimidazole

Celazole® polybenzimidazole (PBI) resin is a unique and highly stable linear hetrocyclic polymer. PBI is characterized by high strength; excellent thermal stability, and broad chemical resistance. Celazole® T-Series products combine the superior mechanical properties and thermal resistance of PBI with the melt process ability of polyaryletherketones. **Designed for injection molding and extrusion** TU-60 is a high performance unfilled blend, ideal for applications requiring no fillers. This material works well for complex geometries and offers the best process ability. Ideal for lamp sockets, connectors and back up seals.

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	
Moisture Absorption at Equilibrium	6.5 %	6.5 %	ASTM D570
Loss On Ignition	5.0 % @Temperature 499 °C	5.0 % @Temperature 930 °F	Air; ASTM TGA
	5.0 % @Temperature 499 °C	5.0 % @Temperature 930 °F	Nitrogen; ASTM TGA
Mechanical Properties	**Metric**	**English**	**Comments**
Hardness, Rockwell A	25	25	ASTM D785
Tensile Strength	100 MPa	14500 psi	ASTM D638
Elongation at Break	2.2 %	2.2 %	
Tensile Modulus	5.00 GPa	725 ksi	
Flexural Strength	175 MPa	25400 psi	ASTM D790
Flexural Modulus	5.00 GPa	725 ksi	
Compressive Strength	206 MPa	29900 psi	ASTM D695
Compressive Modulus	2.90 GPa	421 ksi	
Electrical Properties	**Metric**	**English**	**Comments**
Volume Resistivity	2.00e+16 ohm-cm	2.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.4 @Frequency 1000 Hz	3.4 @Frequency 1000 Hz	ASTM D150
	3.4 @Frequency 10000 Hz	3.4 @Frequency 10000 Hz	ASTM D150
Dielectric Strength	17.0 kV/mm	432 kV/in	ASTM D149
Dissipation Factor	0.0010 @Frequency 10000 Hz	0.0010 @Frequency 10000 Hz	ASTM D150
Arc Resistance	135 sec	135 sec	ASTM D495
Thermal Properties	**Metric**	**English**	**Comments**
CTE, linear	34.0 µm/m-°C @Temperature 25.0 - 150 °C	18.9 µin/in-°F @Temperature 77.0 - 302 °F	ASTM TMA
	70.0 µm/m-°C @Temperature 200 - 300 °C	38.9 µin/in-°F @Temperature 392 - 572 °F	ASTM TMA

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units.

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