



Material: PBI (Celazole ®)

Offers the highest temperature resistance and best mechanical property retention of all unfilled thermoplastics. Very "clean" in terms of ionic impurity and does not outgas (except water). These characteristics make this material extremely attractive to high tech industries. Usually used for critical components to decrease maintenance costs and to gain valuable production time. Very challenging to machine and diamond tipped tools are recommended when machining production quantities.

Technical Specification

Property	Test Method	Units	Value
Colour	-	-	Black
Density	ISO 1183	g/cm ³	1.30
Water Absorption - saturation in air (23°C/50%RH)	-	%	-
Water Absorption - saturation in water (23°C)	-	%	14
Tensile stress at yield/break* ¹	ISO 527	Mpa	-/160
Tensile modulus of elasticity* ¹	ISO 527	Mpa	5800
Tensile strain at break* ¹	ISO 527	%	3
Impact - Charpy	179/1eU	kJ/m ²	-
Impact – Charpy notched	179/1eA	kJ/m ²	3.5
Hardness	Rockwell ISO 2039-2	-	E 104
Glass transition temperature	-	°C	425
Max service temp in air short periods	-	°C	500
Max service temp continuously for 20000hrs	-	°C	310
Linear thermal expansion coefficient (23-100°C)	-	m/(m.k)	25x10 ⁻⁶
Linear thermal expansion coefficient (23-150°C)	-	m/(m.k)	25x10 ⁻⁶
Linear thermal expansion coefficient (+150°C)	-	m/(m.k)	25x10 ⁻⁶
Thermal Conductivity	-	W/(K.m)	0.40
Flammability (3mm thickness)	-	-	VO
Electric Strength	ISO 60243	kV/mm	22
Volume resistivity* ¹	ISO 60093	Ohm.cm	10 ¹⁴
Surface resistivity* ¹	ISO 60093	Ohm	>10 ¹²
* ¹ Measured on dry test specimens (where applicable)			

Availability:

Please call for further details.

Applications:

Light Bulb Contact Parts, Electrical Connectors, Semiconductor and Aerospace industries, Vacuum cup

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The data shown are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.

Not all material sizes shown within the availability programme of this data sheet are available as standard.

Please contact ABG Rubber and Plastics Ltd for further details.