

Celazole® (T Series) TF-60C

Polybenzimidazole
PBI Performance Products, Inc.

Message:

Celazole TF-60C is a carbon-reinforced blend, ideal for parts that require high strength, very low creep, and deflection resistance. A great match for planetary gears, office equipment, semiconductor, electronic and mechanical applications.

General Information			
Filler / Reinforcement	Carbon Fiber		
Features	Good Chemical Resistance		
	Good Creep Resistance		
	Good Dimensional Stability		
	Good Wear Resistance		
	High Heat Resistance		
	High Strength		
Uses	Business Equipment		
	Electrical/Electronic Applications		
	Gears		
	Semiconductor Molding Compounds		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.41	g/cm ³	
Water Absorption			ASTM D570
23°C, 24 hr	0.15	%	
Equilibrium	4.0	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (A-Scale)	30		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	24100	MPa	ASTM D638
Tensile Strength	228	MPa	ASTM D638
Tensile Elongation (Break)	1.4	%	ASTM D638
Flexural Modulus	21000	MPa	ASTM D790
Flexural Strength	321	MPa	ASTM D790
Compressive Modulus	3790	MPa	ASTM D695
Compressive Strength	221	MPa	ASTM D695

Poisson's Ratio	0.39		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	320	°C	ASTM D648
CLTE - Flow (24 to 149°C)	2.6E-5	cm/cm/°C	TMA
Thermal Conductivity (24°C)	0.45	W/m/K	ASTM F433
Heat Capacity (70°C)	1170	J/kg/°C	DSC
Temperature of Initial Weight Loss			Internal Method
Air	599	°C	
Nitrogen	627	°C	

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