GENESIS MEDICAL PLASTICS

TECHNICAL DATA SHEET

KT 820 GF30 PEEK SHAPES

Medical Grade 30% Glass Fiber Reinforced PEEK

Description:

Genesis KT 820 GF30 PEEK contains 30% glass fiber and offers higher strength compared to unfilled PEEK. It also has PEEK's resistance to common sterilization methods and chemicals. The versatile machinable rod and plate sizes are extruded from 30% glass reinforced KetaSpire® KT 820 GF30 PEEK, approved for medical devices with short term (up to 24 hours) exposure to internal bodily tissue and fluids.

Typical Applications:

Precision-machined medical device components that must support high physical loads benefit from KT 820 GF30's rigidity, fatigue resistance and tolerance to frequent sterilization cycles. Applications include:

- Prosthetic device components
- Surgical instruments

Extruded Shapes Properties

PHYSICAL PROPERTIES	METRIC	IMPERIAL	METHODS
Specific Gravity	1.53 g/cc	0.0553 lb/in^3	ASTM D792
Water Absorption	0.10%	0.10%	Immersion, 24hr; ASTM D570
Water Absorption at Saturation	0.3%	0.3%	Immersion; ASTM D570
MECHANICAL PROPERTIES[1]			
Hardness, Rockwell M		103	ASTM D785
Hardness, Rockwell R		126	ASTM D785
Hardness, Shore D		89	ASTM D2240
Tensile Strength, Ultimate	110 MPa	16,000 PSI	ASTM D638
Elongation at Break	5%	5%	ASTM D638
Tensile Modulus	6,900 MPa	1,000,000 PSI	ASTM D638
Flexural Modulus	6,900 MPa	1,000,000 PSI	ASTM D790
Flexural Yield Strength	172 MPa	25,000 PSI	ASTM D790
Compressive Strength	152 MPa	22,000 PSI	10% Def.; ASTM D695
Compressive Modulus	4,136 MPa	600,000 PSI	ASTM D695
Izod Impact (notched)	63 J/m	1.2 ft-lbs/in	ASTM D256
THERMAL PROPERTIES			
Glass Transition Temp./T_g	150° C	302° F	ASTM D3417
Coefficient of Linear Thermal Expansion	2.1 x 10^{-5} C^{-1}	1.2 x 10^{-5} F^{-1}	ASTM E831

[1]The mechanical properties of extruded shapes may differ from the values published by resin producers. Published resin data is always generated from test specimens injection molded under optimum conditions. Genesis' extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining and enhanced crystallinity as a result of processing.