



VICTREX® PEEK 450 CA30

Carbon Fiber Reinforced PEEK

DESCRIPTION

Victrex® PEEK 450 CA30 is among the most recognized of the 30% carbon fiber reinforced PEEK grades. It offers high strength and stiffness for applications demanding strength, wear & abrasion resistance, and broad based chemical resistance. 450 CA30's high strength, surface hardness, and low CLTE in the primary fiber direction, means parts dimensions remain stable with temperature change and meets FDA compliancy. It offers more than 2x the creep resistance of unfilled PEEK, enabling the support of higher loads without permanent deformation. Additionally, it has 2.5x more wear resistance of unfilled PEEK.

TYPICAL APPLICATIONS:

- Pump wear parts & vanes
- Static dissipative components
- Seals & back-up rings

Material Notes: 450 CA30 is the equivalent to KT820 CF30 and is available up to 1" diameter rod.

EXTRUDED SHAPES PROPERTIES

PHYSICAL PROPERTIES	METRIC	IMPERIAL	METHODS
Specific Gravity	1.41 g/cc	0.0515 lb/in ³	ASTM D792
Water Absorption	0.06%	0.06%	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.3%	0.3%	Immersion; ASTM D570(2)
MECHANICAL PROPERTIES*			
Hardness, Rockwell M	102	102	ASTM D785
Hardness, Rockwell	126	126	ASTM D785
Hardness, Shore D	92	92	ASTM D2240
Tensile Strength, Ultimate	131 MPa	19,000 PSI	ASTM D638
Elongation at Break	2%	2%	ASTM D638
Tensile Modulus	8275 MPa	1,200,000 PSI	ASTM D638
Flexural Modulus	8275 MPa	1,200,000 PSI	ASTM D790
Flexural Yield Strength	207 MPa	30,000 PSI	ASTM D790
Compressive Strength	180 MPa	26,000 PSI	10% Def.; ASTM D695
Compressive Modulus	6900 MPa	1,000,000 PSI	ASTM D695
Izod Impact (notched)	52.5 J/m	1.0 ft-lbs/in	ASTM D256 Type A
THERMAL PROPERTIES			
Glass Transition Temp./T _g	340° C	644° F	ASTM D3418
Heat Deflection Temperature (264 PSI)	271° C	520° F	ASTM D638
Coefficient of Linear Thermal Expansion	1.8 x 10 ⁻⁵ C ⁻¹	1.0 x 10 ⁻⁵ F ⁻¹	ASTM E831 TMA

*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. Drake's extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, enhanced crystallinity as a result of processing, and fiber alignment inherent in all reinforced plastic shapes, regardless of process. For additional information on the effects of fiber alignment, see Drake Fiber Orientation Diagram, available on the Resource page of our website.