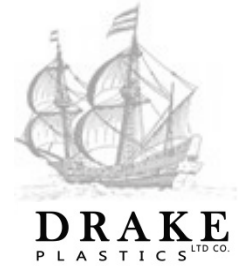




Product Datasheet

KT 820 CF30



Carbon Fiber Reinforced PEEK, Extruded Shapes

KT820 CF30 is 30% carbon fiber reinforced PEEK polymer offering high strength and stiffness for applications demanding strength, wear and abrasion resistance and broad based chemical resistance. KT820 CF30's high molecular weight allows Drake to offer shapes up to 6" diameter with low residual stress and optimal machinability. It's very low CLTE in the primary fiber direction means parts dimensions remain stable with temperature change. KT 820 CF30 offers more than twice the creep resistance of unfilled PEEK enabling the support of higher loads without permanent deformation. Additionally it has 2.5 times the wear resistance of unfilled PEEK. KT 820 CF30's high temperatures reliability combined with its strength make it suitable for:

- Pump wear parts including vanes
- Seals and back-up rings
- Static dissipative components.

Material Notes: KT820 CF30 is the equivalent to Victrex 450CA30 and is available up to 6" diameter rod

Physical Properties	Metric	English	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	100	100	ASTM D785
Hardness, Rockwell R	125	125	ASTM D785
Hardness, Shore D	92	92	ASTM D2240
Tensile Strength, Ultimate	131 MPa	19,000 psi	ASTM D638
Elongation at Break	4%	4 %	ASTM D638
Tensile Modulus	7586 MPa	1,100,000 psi	ASTM D638
Flexural Modulus	7586 MPa	1,100,000 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	6,900 MPa	1,000,000 psi	ASTM D695
Izod Impact (notched)	78.8J/M	1.5ft.lbs/in	ASTM D256 Type A

Thermal Properties

Melt Point	340°C	644°F	ASTMD3418
Heat Deflection Temp (264 psi)	271°C	520°F	ASTM D638
Coefficient of Linear Thermal Exp. in/in/°F	1.8x10 ⁻⁵ C ⁻¹	1x10 ⁻⁵ F ⁻¹	ASTM E831

*The mechanical properties of extruded shapes may differ from the values published by resin producers. Published resin data is always generated off injection molded test specimens run under near perfect conditions. Drake's extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, enhanced crystallinity resulting from 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.