



Product Datasheet

Victrex 450 CA30

Carbon Fiber Reinforced PEEK, Extruded Shapes

Victrex CA30 PEEK is among the most recognized of the 30% carbon fiber reinforced PEEK polymers. It offers high strength and stiffness for applications demanding strength, wear and abrasion resistance and broad based chemical resistance. CA30's high strength and surface hardness plus a very low CLTE in the primary fiber direction means parts dimensions remain stable with temperature change and meet FDA compliancy. It 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 making it ideal for:

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

Material Notes: 450CA30 is the equivalent to KT820CF30 and is available up to 1" 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	102	102	ASTM D785
Hardness, Rockwell R	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	6,900 MPa	1,000,000 psi	ASTM D695
Izod Impact (notched)	52.5J/M	1.0ft-lb/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.