



# Product Datasheet

## KT 820 GF30

*Glass-Fiber Reinforced PEEK, Extruded Shapes*

### Material Notes:

KT820 GF30 is 30% glass-fiber reinforced polyetheretherketone PEEK. This polymer offers higher strength and stiffness properties relative to unreinforced PEEK. Reinforcement affords greater mechanical robustness in structural applications, especially those with service temperatures at or near 300° C.

KT 820 GF30 is characterized by the combination of fatigue resistance, stability during machining, electrical insulation and excellent chemical resistance. These qualities make it well-suited for

- Back-up seals
- Electrical stand-offs
- Structural parts in corrosive service

Physical Properties	Metric	English	Methods
Specific Gravity	1.53	1.53	ASTM D792
Water Absorption	0.10%	0.10 %	Immersion, 24hr; ASTM D570
Water Absorption at Saturation	.3%	.3 %	Immersion; ASTM D570

### Mechanical Properties\*

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	6900 MPa	1,000,000 psi	ASTM D638
Flexural Modulus	6900 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	4136 MPa	600,000 psi	ASTM D695
Izod Impact (notched)	63 J/m	1.2 ft-lb/in	ASTM D256

### Thermal Properties

Melt Point	340°C	644°F	ASTMD3417
Heat Deflection Temp (264 psi)	232°C	450°F	ASTM D648
Coefficient of Linear Thermal Exp. in/in/°F	2.1 x10 <sup>-5</sup> C <sup>-1</sup>	1.2 x10 <sup>-5</sup> F <sup>-1</sup>	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.