



Product Datasheet

AvaSpire® 621GF30

30% Glass Fiber Reinforced, FDA Compliant PAEK, Extruded Shapes

AvaSpire 621GF30 is a 30% glass fiber reinforced PAEK blend developed to offer better toughness than typical glass-reinforced PEEK compositions. It has better chemical resistance than glass reinforced amorphous polymers such as PEI and PAI. It offers excellent machinability, autoclavability and good dielectric properties for high strength parts and machine components requiring FDA compliancy. Typical applications are:

- Surgical instrument handles
- Thermal and electrical insulators
- Fasteners

Material Notes: AV 621 GF30 is one of the strongest and stiffest FDA compliant polymers.

Physical Properties	Metric	English	Methods
Specific Gravity	1.44 g/cc	0.056 lb/in ³	ASTM D792
Water Absorption	0.2%	0.2 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.6 %	0.6 %	Immersion; ASTM D570(2)

Mechanical Properties*

Hardness, Rockwell M	100	100	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Hardness, Shore D	90	90	ASTM D2240
Tensile Strength, Ultimate	105 MPa	15,000 psi	ASTM D638
Elongation at Break	10%	10 %	ASTM D638
Tensile Modulus	5520 MPa	800,000 psi	ASTM D638
Flexural Modulus	5520 MPa	800,000 psi	ASTM D790
Flexural Yield Strength	138 MPa	20,000 psi	ASTM D790
Compressive Strength	124 MPa	18,000 psi	10% Def.; ASTM D695
Compressive Modulus	3450 MPa	500,000 psi	ASTM D695
Izod Impact (notched)	80J/M	1.5	ASTM D256 Type A

Thermal Properties

Melt Point	340°C	644°F	ASTMD3418
Heat Deflection Temp (264 psi)	204°C	400°F	ASTM D638
Coefficient of Linear Thermal Exp. in/in/°F	2.5x10 ⁻⁵ C ⁻¹	1.4x10 ⁻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.