

## KT-820 GF30

KetaSpire KT-820 GF30 is the low-flow, 30% glass-fiber reinforced grade of polyetheretherketone (PEEK). This resin offers higher strength and stiffness properties relative to unreinforced KetaSpire PEEK resin. Reinforcement also affords greater mechanical robustness in structural applications, particularly those with service temperatures approaching 300°C.

KetaSpire PEEK is produced to the highest industry standards and is characterized by a distinct combination of best-in-class fatigue resistance, ease of melt processing, high purity, and excellent chemical resistance to organics, acids, and bases.

These properties make it well-suited for applications in healthcare, transportation, electronics, chemical processing, and other industrial uses. KetaSpire KT-820 GF30 can be easily processed using typical injection molding and extrusion processes.

### Typical Properties of KetaSpire KT-820 GF30 Resin

Property	ASTM Test Method	Typical Values <sup>(1)</sup>			
		U.S. Customary Units		SI Units	
		Value	Units	Value	Units
<b>Mechanical</b>					
Tensile Strength	D 638	22.8	kpsi	158	MPa
Tensile Modulus	D 638	1,530	kpsi	10.5	GPa
Tensile Elongation at Break	D 638	2.7	%	2.7	%
Flexural Strength	D 790	37.8	kpsi	261	MPa
Flexural Modulus	D 790	1,510	kpsi	10.4	GPa
Izod Impact, Notched	D 256	2.0	ft-lb/in	107	J/m
Izod Impact, Unnotched	D 4812	18	ft-lb/in	960	J/m
<b>Thermal</b>					
Deflection Temperature at 264 psi (1.82 MPa)	D 648	599	°F	315	°C
Glass Transition Temperature	D 3417	302	°F	150	°C
Melting Point	D 3417	644	°F	340	°C
Coefficient Linear Thermal Expansion <sup>(2)</sup>	E 831	9.4	ppm/°F	17	ppm/°C
<b>General and Fabrication</b>					
Specific Gravity	D 792	1.53		1.53	
Water Absorption, 24 hours	D 570	0.1	%	0.1	%
Melt Flow, 400°C, 2.16 kg	D 1238	0.7	g/10 min	0.7	g/10 min
Mold Shrinkage, flow direction	D 955	0.4	%	0.4	%
Mold Shrinkage, transverse direction	D 955	0.9	%	0.9	%

<sup>(1)</sup> Properties shown are typical of limited production and final specification ranges may vary. Values are typical of uncolored resin, addition of colorants or other additives may alter properties.

<sup>(2)</sup> Measured in flow direction over the temperature range -50°C to 50°C

## Drying

KetaSpire resins must be dried completely prior to melt processing. Incomplete drying will result in defects in the formed part ranging from surface streaks to severe bubbling. Pellets can be dried on trays in a circulating air oven or in desiccating hopper dryer. Drying conditions recommended are 4 hours at 150°C (300°F) .

## Injection Molding

KetaSpire resins can be readily injection molded in most screw injection machines. A general purpose screw with a compression ratio in the range of 2.5 to 3.5 to 1 is recommended, as is minimum back pressure. Injection speeds should be as fast as possible, consistent with part appearance requirements. Mold temperatures in the range of 350°F to 400°F (177°C to 204°C) are suggested. Recommended starting point barrel temperature settings are shown in the following table.

Zone heater settings		
Zone	Recommended Barrel Temperatures	
	°F	°C
Rear (Feed)	690	365
Middle	700	371
Front	710	377
Nozzle	720	382

## Standard Packaging and Labeling

KetaSpire resins are packaged in polyethylene buckets or cardboard boxes depending upon the order size.

Individual packages will be plainly marked with the product number, the color, the lot number, and the net weight.

## Product Safety and Emergency Service

For product safety information or a Material Safety Data Sheet on a product of Solvay Advanced Polymers

**1 (800) 621-4557**

**1 (770) 772-8880 outside of U.S.**

For information or help in an emergency such as a spill, leak, fire or explosion, call day or night:

Emergency Health Information

**1 (800) 621-4590**

**1 (770) 772-5177 outside of U.S.**

Emergency Spill Information

**CHEMTREC 1 (800) 424-9300**

**1 (703) 527-3887 outside of U.S.**

**collect calls accepted**

## For Additional Information

Technical Service

**1 (800) 621-4557**

Customer Service

**1 (800) 848-9744**

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