Solvay Specialty Polymers KetaSpire® KT-820 GF30 Polyetheretherketone (PEEK) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Glass Fiber Filled

Material Notes:

KetaSpire KT-820 GF30 is a medium 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. Beige: KetaSpire KT-820 GF30 BG20Information provided by Solvay Specialty Polymers.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-KetaSpire-KT-820-GF30-Polyetheretherketone-PEEK-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.53 g/cc	1.53 g/cc	ASTM D792
Filler Content	30 %	30 %	Glass Fiber Reinforcement
Water Absorption	0.10 % @Time 86400 sec	0.10 % @Time 24.0 hour	ASTM D570
Viscosity	850000 cP @Shear Rate 1000 1/s, Temperature 400 °C	850000 cP @Shear Rate 1000 1/s, Temperature 752 °F	Melt; ASTM D3835
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm @Thickness 3.18 mm	0.0020 - 0.0040 in/in @Thickness 0.125 in	5" x 0.5" x 0.125"; ASTM D955
Linear Mold Shrinkage, Transverse	0.014 - 0.016 cm/cm @Thickness 3.18 mm	0.014 - 0.016 in/in @Thickness 0.125 in	5" x 0.5" x 0.125"; ASTM D955
Melt Flow	0.70 g/10 min @Load 2.16 kg, Temperature 400 °C	0.70 g/10 min @Load 4.76 lb, Temperature 752 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100	100	M-Scale; ASTM D785
Hardness, Shore D	91 @Time 1.00 sec	91 @Time 0.000278 hour	ASTM D2240

Mechanical Properties	Metric	English	Comments
Tensile Strength	158 MPa	22900 psi	ASTM D638
Tensile Strength, Yield	158 MPa	22900 psi	5.0 mm/min; ASTM D638
	165 MPa	23900 psi	ISO 527-2/1A/5
Elongation at Break	2.7 %	2.7 %	5.0 mm/min; ASTM D638
	2.7 %	2.7 %	ISO 527-2/1A/5
Tensile Modulus	10.5 GPa	1520 ksi	5.0 mm/min; ASTM D638
	11.4 GPa	1650 ksi	ISO 527-2/1A/1
Flexural Strength	246 MPa	35700 psi	ISO 178
	261 MPa	37900 psi	ASTM D790
Flexural Yield Strength	261 MPa	37900 psi	ASTM D790
Flexural Modulus	10.4 GPa	1510 ksi	ASTM D790
	10.7 GPa	1550 ksi	ISO 178
Compressive Strength	169 MPa	24500 psi	ASTM D695
Poissons Ratio	0.34	0.34	ASTM E132
Shear Modulus	3.92 - 4.25 GPa	569 - 616 ksi	Calculated
Shear Strength	93.1 MPa	13500 psi	ASTM D732
Izod Impact, Notched	1.10 J/cm	2.06 ft-lb/in	ASTM D256
	9.60 J/cm	18.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	13.0 kJ/m²	6.19 ft-lb/in²	ISO 180
Izod Impact, Unnotched (ISO)	56.0 kJ/m²	26.6 ft-lb/in²	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	17.0 µm/m-°C @Temperature -50.0 - 50.0 °C	9.44 µin/in-°F @Temperature -58.0 - 122 °F	TMA; ASTM E831
Specific Heat Capacity	1.30 J/g-°C @Temperature 50.0 °C	0.311 BTU/lb-°F @Temperature 122 °F	DSC
	1.73 J/g-°C @Temperature 200 °C	0.413 BTU/lb-°F @Temperature 392 °F	DSC
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft²-°F	ASTM E1530

Thermal Properties	Metric	English	Comments
Melting Point	340 °C	644 °F	Peak; ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	315 °C	599 °F	Annealed; ASTM D648
Glass Transition Temp, Tg	150 °C	302 °F	ASTM D3418
Flammability, UL94	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	UL 94
	V-0 @Thickness 20.3 mm	V-0 @Thickness 0.799 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.90e+17 ohm-cm	1.90e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.90e+17 ohm	>= 1.90e+17 ohm	ASTM D257
Dielectric Constant	3.41 @Frequency 1.00e+6 Hz	3.41 @Frequency 1.00e+6 Hz	ASTM D150
	3.44 @Frequency 1000 Hz	3.44 @Frequency 1000 Hz	ASTM D150
	3.44 @Frequency 60.0 Hz	3.44 @Frequency 60.0 Hz	ASTM D150
Dielectric Strength	17.0 kV/mm @Thickness 3.00 mm	432 kV/in @Thickness 0.118 in	ASTM D149
Dissipation Factor	0.0010 @Frequency 1000 Hz	0.0010 @Frequency 1000 Hz	ASTM D150
	0.0010 @Frequency 60.0 Hz	0.0010 @Frequency 60.0 Hz	ASTM D150
	0.0030 @Frequency 1.00e+6 Hz	0.0030 @Frequency 1.00e+6 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	365 °C	689 °F	
Middle Barrel Temperature	370 °C	698 °F	

Processing Properties	Metric	English	Comments
Front Barrel Temperature	375 °C	707 °F	
Nozzle Temperature	380 °C	716 °F	
Mold Temperature	175 - 205 °C	347 - 401 °F	
Drying Temperature	150 °C	302 °F	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Agency Ratings	ISO 10993	
	ISO 10993-Part 1	
Appearance	Beige	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Autoclave Sterilizable	
	E-beam Sterilizable	
	Ethylene Oxide Sterilizable	
	Fatigue Resistant	
	Flame Retardant	
	Good Chemical Resistance	
	Good Dimensional Stability	
	Good Sterilizability	
	Heat Sterilizable	
	High Heat Resistance	
	High Stiffness	
	High Strength	
	Radiation (Gamma) Resistant	

Descriptive Properties	Value	Comments
	Radiation Sterilizable	
	Radiotranslucent	
	Steam Resistant	
	Steam Sterilizable	
Forms	Pellets	
	Powder	
Generic	PEEK	
Injection Rate	Fast	
Processing Method	Injection Molding	
	Machining	
	Profile Extrusion	
RoHS Compliance	RoHS Compliant	
Screw Compression Ratio	2.5:1.0 to 3.5:1.0	
Uses	Aircraft Applications	
	Connectors	
	Dental Applications	
	Electrical/Electronic Applications	
	Film	
	Hospital Goods	
	Industrial Applications	
	Medical Appliances	
	Medical/Healthcare Applications	
	Oil/Gas Applications	
	Seals	
	Surgical Instruments	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China