

Solvay Specialty Polymers KetaSpire® KT-880 GF30 Polyetheretherketone (PEEK), 30% Glass Fiber

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

Material Notes:

KetaSpire® KT-880 GF30 is the high-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. Features: Autoclave Sterilizable; Biocompatible; E-beam Sterilizable; Ethylene Oxide Sterilizable; Fatigue Resistant; Flame Retardant; Good Chemical Resistance; Good Dimensional Stability; Good Sterilizability; Heat Sterilizable; High Flow; High Heat Resistance; High Stiffness; High Strength; Radiation (Gamma) Resistant; Radiation Sterilizable; Radiotranslucent; Steam Resistant; Steam Sterilizable. Uses: Aircraft Applications; Connectors; Dental Applications; Electrical/Electronic Applications; Film; Hospital Goods; Industrial Applications; Medical Devices; Medical/Healthcare Applications; Oil/Gas Applications; Pump Parts; Seals; Surgical Instruments. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-KetaSpire-KT-880-GF30-Polyetheretherketone-PEEK-30-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.53 g/cc	0.0553 lb/in ³	ASTM D792
Filler Content	30 %	30 %	Glass Fiber
Water Absorption	0.10 % @Time 86400 sec	0.10 % @Time 24.0 hour	ISO 62
Viscosity	350000 cP @Shear Rate 1000 1/s, Temperature 400 °C	350000 cP @Shear Rate 1000 1/s, Temperature 752 °F	Melt Viscosity; ASTM D3835
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm @Thickness 3.18 mm	0.0010 - 0.0030 in/in @Thickness 0.125 in	
Linear Mold Shrinkage, Transverse	0.013 - 0.015 cm/cm @Thickness 3.18 mm	0.013 - 0.015 in/in @Thickness 0.125 in	ASTM D955
Melt Flow	14 g/10 min @Load 2.16 kg, Temperature 400 °C	14 g/10 min @Load 4.76 lb, Temperature 752 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	105	105	ASTM D785
Tensile Strength	162 MPa	23500 psi	ASTM D638

Tensile Strength, Yield Mechanical Properties	174 MPa Metric	25200 psi English	5 mm/min, Type 1A; ISO 527-2 Comments
Elongation at Break	2.8 %	2.8 %	Type 1A, 5 mm/min; ISO 527-2
	2.8 %	2.8 %	5 mm/min; ASTM D638
Tensile Modulus	10.8 GPa	1570 ksi	5 mm/min; ASTM D638
	11.2 GPa	1620 ksi	ISO 527-2
Flexural Strength	239 MPa	34700 psi	ISO 178
	260 MPa	37700 psi	ASTM D790
Flexural Modulus	10.5 GPa	1520 ksi	ASTM D790
	10.6 GPa	1540 ksi	ISO 178
Compressive Strength	183 MPa	26500 psi	ASTM D695
Shear Strength	94.4 MPa	13700 psi	ASTM D732
Izod Impact, Notched	0.960 J/cm	1.80 ft-lb/in	ASTM D256
Izod Impact, Unnotched	8.50 J/cm	15.9 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	11.0 kJ/mÂ²	5.23 ft-lb/inÂ²	ISO 180
Izod Impact, Unnotched (ISO)	62.0 kJ/mÂ²	29.5 ft-lb/inÂ²	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	19.0 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	10.6 Âµin/in-Â°F @Temperature -58.0 - 122 Â°F	1
Specific Heat Capacity	1.28 J/g-Â°C @Temperature 50.0 Â°C	0.306 BTU/lb-Â°F @Temperature 122 Â°F	ASTM C351
	1.70 J/g-Â°C @Temperature 200 Â°C	0.406 BTU/lb-Â°F @Temperature 392 Â°F	ASTM C351
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ftÂ²- Â°F	ASTM C177
Melting Point	343 Â°C	649 Â°F	ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	315 Â°C	599 Â°F	Annealed; ASTM D648
Glass Transition Temp, Tg	147 Â°C	297 Â°F	DSC
	V-0	V-0	

Thermal Properties	Metric	English	Comments
	@Thickness 0.800 - 1.60 mm	@Thickness 0.0315 - 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.80e+17 ohm-cm	3.80e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.90e+17 ohm	>= 1.90e+17 ohm	ASTM D257
Dielectric Constant	3.49	3.49	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.53	3.53	
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	ASTM D150
Dielectric Strength	3.53	3.53	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	16.0 kV/mm	406 kV/in	
	@Thickness 3.00 mm	@Thickness 0.118 in	ASTM D149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.0020	0.0020	
	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	0.0040	0.0040	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	365 Â°C	689 Â°F	
Middle Barrel Temperature	371 Â°C	700 Â°F	
Front Barrel Temperature	377 Â°C	711 Â°F	
Nozzle Temperature	382 Â°C	720 Â°F	
Mold Temperature	177 - 204 Â°C	351 - 399 Â°F	
Drying Temperature	150 Â°C	302 Â°F	
	@Time 14400 sec	@Time 4.00 hour	

Descriptive Properties	Value	Comments
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Descriptive Properties	Value	Comments
Availability	FA1, FAR 25.853a; ISO 10993; ISO 10993-Part 1	
	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Light Beige	
Form	Pellets	
Injection Rate	Fast	
Processing Technique	Injection Molding; Machining; Profile Extrusion	
RoHS Compliance	RoHS Compliant	
Screw Compression Ratio	2.5:1.0 to 3.5:1.0	

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