

Solvay Specialty Polymers KetaSpire[®] KT-850 Polyetheretherketone (PEEK)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK)

Material Notes:

KetaSpire[®] KT-850 is the intermediate-flow grade of unreinforced polyetheretherketone (PEEK) supplied in a natural-color pellet form. KetaSpire[®] PEEK is produced to the highest industry standards and is characterized by a distinct combination of properties, which include excellent wear resistance, best-in-class fatigue resistance, ease of melt processing, high purity and excellent chemical resistance to organics, acids and bases. Features: Ductile; Fatigue Resistant; Flame Retardant; Good Chemical Resistance; Good Dimensional Stability; Good Impact Resistance; High Heat Resistance. Uses: Aircraft Applications; Automotive Applications; Bearings; Bushings; Compounding; Electrical/Electronic Applications; Film; Industrial Applications; Medical/Healthcare Applications; Oil/Gas Applications; Seals; Tubing. Injection Molding Notes: Back Pressure: minimum. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-KetaSpire-KT-850-Polyetheretherketone-PEEK.php

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/in ³	ASTM D792
Water Absorption	0.10 %	0.10 %	ISO 62
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	380000 cP	380000 cP	Melt Viscosity; ASTM D3835
	@Shear Rate 1000 1/s, Temperature 400 Å°C	@Shear Rate 1000 1/s, Temperature 752 Å°F	
Linear Mold Shrinkage, Flow	0.012 cm/cm	0.012 in/in	
	@Thickness 3.18 mm	@Thickness 0.125 in	
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	ASTM D955
	@Thickness 3.18 mm	@Thickness 0.125 in	
Melt Flow	10 g/10 min	10 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 400 Å°C	@Load 4.76 lb, Temperature 752 Å°F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	88	88	1 sec; ASTM D2240
Tensile Strength	96.5 MPa	14000 psi	50 mm/min; ASTM D638
Elongation at Break	20 - 30 %	20 - 30 %	50 mm/min; ASTM D638
	>= 50 %	>= 50 %	
Elongation at Yield	5.2 %	5.2 %	50 mm/min; ASTM D638

Tensile Modulus Mechanical Properties	3.65 GPa Metric	529 ksi English	50 mm/min; ASTM D638 Comments
Flexural Strength	146 MPa	21200 psi	ASTM D790
Flexural Modulus	3.70 GPa	537 ksi	ASTM D790
Izod Impact, Notched	0.910 J/cm	1.70 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	43.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature -50.0 - 50.0 $\text{Å}^\circ\text{C}$	23.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature -58.0 - 122 $\text{Å}^\circ\text{F}$	1
Melting Point	340 $\text{Å}^\circ\text{C}$	644 $\text{Å}^\circ\text{F}$	DSC
Deflection Temperature at 1.8 MPa (264 psi)	162 $\text{Å}^\circ\text{C}$	324 $\text{Å}^\circ\text{F}$	Annealed; ASTM D648
Glass Transition Temp, Tg	150 $\text{Å}^\circ\text{C}$	302 $\text{Å}^\circ\text{F}$	DSC

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	355 $\text{Å}^\circ\text{C}$	671 $\text{Å}^\circ\text{F}$	
Middle Barrel Temperature	365 $\text{Å}^\circ\text{C}$	689 $\text{Å}^\circ\text{F}$	
Front Barrel Temperature	370 $\text{Å}^\circ\text{C}$	698 $\text{Å}^\circ\text{F}$	
Nozzle Temperature	375 $\text{Å}^\circ\text{C}$	707 $\text{Å}^\circ\text{F}$	
Mold Temperature	175 - 205 $\text{Å}^\circ\text{C}$	347 - 401 $\text{Å}^\circ\text{F}$	
Drying Temperature	150 $\text{Å}^\circ\text{C}$ @Time 14400 sec	302 $\text{Å}^\circ\text{F}$ @Time 4.00 hour	

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Natural	

Form

Descriptive Properties	Pellets Value	Comments
Injection Rate	Fast	
Processing Technique	Extrusion Blow Molding; Film Extrusion	
	Injection Molding; Machining; Profile Extrusion	
	Thermoforming; Wire & Cable Extrusion	
RoHS Compliance	RoHS Compliant	
Screw Compression Ratio	2.5:1.0 to 3.5:1.0	

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