Solvay Specialty Polymers KetaSpireÂ® KT-820 NL Polyetheretherketone (PEEK)

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

Material Notes:

KetaSpireÂ® KT-820 NL is a low flow grade of unreinforced polyetheretherketone (PEEK) supplied in non-lubricated, natural-color pellet form. KetaSpireÂ® 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 ResistanceUses: Aircraft Applications; Automotive Applications; Electrical/Electronic Applications; Film; Industrial Applications; Medical/Healthcare Applications; Oil/Gas ApplicationsInjection Molding Notes: 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.Information provided by Solvay Specialty Polymers.

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

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/inÂ³	ASTM D792
Water Absorption	0.10 % @Time 86400 sec	0.10 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.015 cm/cm	0.015 in/in	
Linear Mold Shrinkage, Transverse	0.018 cm/cm	0.018 in/in	ASTM D955
Melt Flow	3.0 g/10 min @Load 2.16 kg, Temperature 400 Â°C	3.0 g/10 min @Load 4.76 lb, Temperature 752 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	88	88	1 sec; ASTM D2240
Tensile Strength	95.0 MPa	13800 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	96.0 MPa	13900 psi	Type 1A, 50 mm/min; ISO 527-2
Elongation at Break	20 - 30 %	20 - 30 %	Type 1A, 50 mm/min; ISO 527-2
	20 - 30 %	20 - 30 %	50 mm/min; ASTM D638
Elongation at Yield	4.9 %	4.9 %	Type 1A, 50 mm/min; ISO 527-2
	5.2 %	5.2 %	50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
	3.83 GPa	555 ksi	1 mm/min, Type 1A; ISO 527-2
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 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	23.9 Âµin/in-Â°F @Temperature -58.0 - 122 Â°F	1
Melting Point	340 Â°C	644 Â°F	ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	157 Â°C	315 Â°F	Unannealed; ASTM D648
Glass Transition Temp, Tg	150 Â°C	302 Â°F	DSC

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	355 Â°C	671 Â°F	
Middle Barrel Temperature	365 Â°C	689 Â°F	
Front Barrel Temperature	370 Â°C	698 Â°F	
Nozzle Temperature	375 Â°C	707 Â°F	
Mold Temperature	175 - 205 Â°C	347 - 401 Â°F	
Drying Temperature	150 Â°C @Time 14400 sec	302 Â°F @Time 4.00 hour	

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

Descriptive Properties	Value	Comments
Color	Natural	
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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