

Solvay Specialty Polymers KetaSpire® KT-820 SL30 Polyetheretherketone (PEEK)

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

Material Notes:

KetaSpire® KT-820 SL30 is a polyetheretherketone (PEEK) compound designed to provide a balance of excellent mechanical properties, wear resistance and low coefficient of friction in both dry and externally lubricated applications. The resin is formulated with a ternary anti-friction/anti-wear additive system comprised of carbon fiber, graphite, and polytetrafluoroethylene (PTFE). 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: Fatigue Resistant; Flame Retardant; Good Chemical Resistance; Good Dimensional Stability; Good Wear Resistance; High Heat Resistance Uses: Aircraft Applications; Bearings; Bushings; Film; Gears; Industrial Applications; Profiles; Rods; Sheet; 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-820-SL30-Polyetheretherketone-PEEK.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	ASTM D792
Water Absorption	0.14 % @Time 86400 sec	0.14 % @Time 24.0 hour	ISO 62
Viscosity	270000 cP @Shear Rate 1000 1/s, Temperature 400 Â°C	270000 cP @Shear Rate 1000 1/s, Temperature 752 Â°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	0.015 - 0.017 cm/cm @Thickness 3.18 mm	0.015 - 0.017 in/in @Thickness 0.125 in	ASTM D955
Melt Flow	2.4 g/10 min @Load 2.16 kg, Temperature 400 Â°C	2.4 g/10 min @Load 4.76 lb, Temperature 752 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	80	80	ASTM D785
Hardness, Shore D	86	86	1 sec; ASTM D2240
Tensile Strength	133 MPa	19300 psi	ASTM D638
Tensile Strength, Yield	150 MPa	21800 psi	5 mm/min, Type 1A; ISO 527-2

Mechanical Properties	Metric	English	Comments
	2.8 %	2.8 %	5 mm/min; ASTM D638
Tensile Modulus	11.0 GPa	1600 ksi	5 mm/min; ASTM D638
	14.4 GPa	2090 ksi	1 mm/min, Type 1A; ISO 527-2
Flexural Strength	218 MPa	31600 psi	ISO 178
	221 MPa	32100 psi	ASTM D790
Flexural Modulus	10.5 GPa	1520 ksi	ASTM D790
	14.9 GPa	2160 ksi	ISO 178
Compressive Strength	110 MPa	16000 psi	ASTM D695
Shear Strength	70.3 MPa	10200 psi	ASTM D732
Izod Impact, Notched	0.690 J/cm	1.29 ft-lb/in	ASTM D256
Izod Impact, Unnotched	5.30 J/cm	9.93 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	9.00 kJ/m ²	4.28 ft-lb/in ²	ISO 180
Izod Impact, Unnotched (ISO)	34.0 kJ/m ²	16.2 ft-lb/in ²	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	22.0 Åµm/m-Å°C	12.2 Åµin/in-Å°F	1
	@Temperature -50.0 - 50.0 Å°C	@Temperature -58.0 - 122 Å°F	
	22.0 Åµm/m-Å°C	12.2 Åµin/in-Å°F	1
	@Temperature -50.0 - 50.0 Å°C	@Temperature -58.0 - 122 Å°F	
Specific Heat Capacity	1.36 J/g-Å°C	0.325 BTU/lb-Å°F	ASTM C351
	@Temperature 50.0 Å°C	@Temperature 122 Å°F	
	1.84 J/g-Å°C	0.440 BTU/lb-Å°F	ASTM C351
	@Temperature 200 Å°C	@Temperature 392 Å°F	
Thermal Conductivity	0.400 W/m-K	2.78 BTU-in/hr-ftÅ²-Å°F	ASTM C177
Melting Point	342 Å°C	648 Å°F	ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	291 Å°C	556 Å°F	Unannealed; ASTM D648

Thermal Properties	291 Â°C Metric	556 Â°F English	Annealed* ASTM D648 Comments
Glass Transition Temp, Tg	152 Â°C	306 Â°F	DSC
Flammability, UL94	V-0 @Thickness 0.800 - 1.60 mm	V-0 @Thickness 0.0315 - 0.0630 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	366 Â°C	691 Â°F	
Middle Barrel Temperature	370 Â°C	698 Â°F	
Front Barrel Temperature	375 Â°C	707 Â°F	
Nozzle Temperature	380 Â°C	716 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
Additive	Carbon Fiber + Graphite + PTFE Lubricant	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Black	
Form	Pellets	
Injection Rate	Fast	
Processing Technique	Injection Molding; Machining; Profile Extrusion	
Screw Compression Ratio	2.5:1.0 to 3.5:1.0	

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