

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

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

Material Notes:

KetaSpire KT-820 NL is a low flow grade of unreinforced polyetheretherketone (PEEK) supplied in non-lubricated, 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. These properties make it well-suited for applications in healthcare, transportation, electronics, chemical processing, and other industrial uses. This resin is also available as KetaSpire KT-820P in a natural-color coarse powder form for compounding. A lubricated form of the resin is available as KT-820 in either natural (NT) or black (BK 95). The lubricated version is lightly dusted with calcium stearate (0.01% level) to aid with pellet conveyance in plastication screws. Additional Information: Standard Packaging and Labeling - KetaSpire resins are packaged in polyethylene buckets or cardboard boxes depending upon the order size. Individual packages will be plainly marked with the product, color, lot number, and net weight. Injection Notes: Drying - 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. Drying conditions recommended are 4 hours at 150°C (300°F) . Injection Molding - KetaSpire resins can be readily injection molded in most screw injection machines. A general purpose screw with a compression ratio in the range of 2.5 - 3.5 : 1 is recommended, as is minimum back pressure. Injection speeds should be as fast as possible, consistent with part appearance requirements. Mold temperatures in the range of 175°C to 205°C (350°F to 400°F) are suggested. Recommended starting point barrel temperatures are shown in the following table. 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-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Water Absorption	0.10 % @Time 86400 sec	0.10 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.015 cm/cm	0.015 in/in	ASTM D955
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 °C	3.0 g/10 min @Load 4.76 lb, Temperature 752 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	88 @Time 1.00 sec	88 @Time 0.000278 hour	ASTM D2240

Mechanical Properties	MetricPa	Englishpsi	Comments; ASTM D638
Tensile Strength, Yield	96.0 MPa	13900 psi	ISO 527-2/1A/50
Elongation at Break	20 - 30 %	20 - 30 %	50 mm/min; ASTM D638
	20 - 30 %	20 - 30 %	ISO 527-2/1A/50
Elongation at Yield	4.9 %	4.9 %	ISO 527-2/1A/50
	5.2 %	5.2 %	50 mm/min; ASTM D638
Tensile Modulus	3.50 GPa	508 ksi	50 mm/min; ASTM D638
	3.83 GPa	555 ksi	ISO 527-2/1A/1
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
	NB	NB	ASTM D4812

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	43.0 µm/m-°C @Temperature -50.0 - 50.0 °C	23.9 µin/in-°F @Temperature -58.0 - 122 °F	TMA; ASTM E831
Melting Point	340 °C	644 °F	Peak; ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	157 °C	315 °F	Unannealed; ASTM D648
Glass Transition Temp, Tg	150 °C	302 °F	ASTM D3418

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	355 °C	671 °F	
Middle Barrel Temperature	365 °C	689 °F	
Front Barrel Temperature	370 °C	698 °F	
Nozzle Temperature	375 °C	707 °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
Appearance	Natural Color	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Ductile	
	Fatigue Resistant	
	Flame Retardant	
	Good Chemical Resistance	
	Good Dimensional Stability	
	Good Impact Resistance	
	High Heat Resistance	
Forms	Pellets	non-lubricated
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	
	Automotive Applications	
	Electrical/Electronic Applications	
	Film	
	Industrial Applications	
	Medical/Healthcare Applications	

Descriptive Properties	Value	Comments
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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