

## Solvay Specialty Polymers KetaSpire® KT-880 Polyetheretherketone (PEEK) (Unverified Data\*\*)

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

### Material Notes:

KetaSpire KT-880 is a high flow grade of unreinforced polyetheretherketone (PEEK) supplied in 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. KetaSpire KT-880 NT can be easily processed using typical injection molding processes. This resin is also available as KT-880P in a natural-color coarse powder form for compounding. Pellets of KT-880 are supplied lightly dusted with the lubricant calcium stearate (0.01% level) to aid with pellet conveyance in plastication screws. The equivalent unlubricated natural color grade of low flow KetaSpire is available as KT-880 NL. - Black: KT-880 BK 95 - Natural: KT-880 NT Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-KetaSpire-KT-880-Polyetheretherketone-PEEK-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-KetaSpire-KT-880-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
Viscosity	150000 cP @Shear Rate 1000 1/s, Temperature 400 °C	150000 cP @Shear Rate 1000 1/s, Temperature 752 °F	Melt; ASTM D3835
Linear Mold Shrinkage, Flow	0.014 - 0.016 cm/cm @Thickness 0.318 mm	0.014 - 0.016 in/in @Thickness 0.0125 in	5" x 0.5" x 0.125"; ASTM D955
Linear Mold Shrinkage, Transverse	0.015 - 0.017 cm/cm @Thickness 3.18 mm	0.015 - 0.017 in/in @Thickness 0.125 in	5" x 0.5" x 0.125"; ASTM D955
Melt Flow	36 g/10 min @Load 2.16 kg, Temperature 400 °C	36 g/10 min @Load 4.76 lb, Temperature 752 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	102	102	M-Scale; ASTM D785
Tensile Strength	100 MPa	14500 psi	51 mm/min; ASTM D638
Tensile Strength, Yield	102 MPa	14800 psi	ISO 527-2/1A/50

Elongation at Break Mechanical Properties	10 - 20 % Metric	10 - 20 % English	50 mm/min; ASTM D638 Comments
	10 - 20 %	10 - 20 %	ISO 527-2/1A/50
Elongation at Yield	5.0 %	5.0 %	ISO 527-2/1A/50
	5.2 %	5.2 %	50 mm/min; ASTM D638
Tensile Modulus	3.70 GPa	537 ksi	1.0 mm/min; ASTM D638
	4.00 GPa	580 ksi	ISO 527-2/1A/1
Flexural Strength	134 MPa	19400 psi	ISO 178
	153 MPa	22200 psi	ASTM D790
Flexural Modulus	3.80 GPa	551 ksi	ASTM D790
	3.90 GPa	566 ksi	ISO 178
Compressive Strength	123 MPa	17800 psi	ASTM D695
Poissons Ratio	0.37	0.37	ASTM E132
Shear Modulus	1.35 - 1.46 GPa	196 - 212 ksi	Calculated
Shear Strength	95.1 MPa	13800 psi	ASTM D732
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	ASTM D256
	NB	NB	ASTM D4812
Izod Impact, Notched (ISO)	4.90 kJ/m <sup>2</sup>	2.33 ft-lb/in <sup>2</sup>	ISO 180
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	27.8 $\mu\text{in}/\text{in}\cdot\text{°F}$	TMA; ASTM E831
	@Temperature -50.0 - 50.0 $\text{°C}$	@Temperature -58.0 - 122 $\text{°F}$	
Specific Heat Capacity	1.33 $\text{J}/\text{g}\cdot\text{°C}$	0.318 $\text{BTU}/\text{lb}\cdot\text{°F}$	DSC
	@Temperature 50.0 $\text{°C}$	@Temperature 122 $\text{°F}$	
Thermal Conductivity	1.93 $\text{J}/\text{g}\cdot\text{°C}$	0.461 $\text{BTU}/\text{lb}\cdot\text{°F}$	DSC
	@Temperature 200 $\text{°C}$	@Temperature 392 $\text{°F}$	
Thermal Conductivity	0.250 $\text{W}/\text{m}\cdot\text{K}$	1.74 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot\text{°F}$	ASTM E1530
Melting Point	343 $\text{°C}$	649 $\text{°F}$	Peak; ASTM D3418
Deflection Temperature at 1.8 MPa			Annealed; ASTM D648

(264 psi) Thermal Properties	160 °C Metric	320 °F English	Comments
Glass Transition Temp, Tg	147 °C	297 °F	ASTM D3418

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	3.01	3.01	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	3.07	3.07	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.1	3.1	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	15.0 kV/mm	381 kV/in	ASTM D149
	@Thickness 3.00 mm	@Thickness 0.118 in	
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0010	0.0010	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.0030	0.0030	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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	

<b>Descriptive Properties</b>	<b>Value</b>	<b>Comments</b>
<b>Agency Ratings</b>	ISO 10993	
	ISO 10993-Part 1	
<b>Appearance</b>	Black	
	Natural Color	
<b>Availability</b>	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
<b>Features</b>	Autoclave Sterilizable	
	Biocompatible	
	Ductile	
	E-beam Sterilizable	
	Ethylene Oxide Sterilizable	
	Fatigue Resistant	
	Flame Retardant	
	Good Chemical Resistance	
	Good Dimensional Stability	
	Good Impact Resistance	
	Good Sterilizability	
	Heat Sterilizable	
	High Flow	
	High Heat Resistance	
	Radiation (Gamma) Resistant	
	Radiation Sterilizable	
	Radiotranslucent	

Descriptive Properties	Steam Resistant Value Steam Sterilizable	Comments
Forms	Pellets	
Generic	PEEK	
Injection Rate	Fast	
Processing Method	Extrusion Blow Molding	
	Fiber (Spinning) Extrusion	
	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	
Uses	Aircraft Applications	
	Connectors	
	Dental Applications	
	Electrical/Electronic Applications	
	Film	
	Hospital Goods	
	Industrial Applications	
	Medical Appliances	
	Medical/Healthcare Applications	
	Oil/Gas Applications	
	Pump Parts	
	Seals	
	Surgical Instruments	

## **Contact Songhan Plastic Technology Co.,Ltd.**

**Website : [www.lookpolymers.com](http://www.lookpolymers.com)**

**Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)**

**Tel : +86 021-51131842**

**Mobile : +86 13061808058**

**Skype : lookpolymers**

**Address : United North Road 215,Fengxian District, Shanghai City,China**