KetaSpire® KT-850

polyetheretherketone

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.

These properties make it well-suited for applications in healthcare, transportation, electronics, chemical processing and other industrial uses.

- Natural: KT-850 NT

General			
Material Status	• Commercial: Active		
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
Uses	• Aircraft Applications • Automotive Applications • Bearings • Bushings	• Compounding • Electrical/Electronic Applications • Film • Industrial Applications	• Medical/Healthcare Applications • Oil/Gas Applications • Seals • Tubing
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion Blow Molding • Film Extrusion • Injection Molding	• Machining • Profile Extrusion • Thermoforming	• Wire & Cable Extrusion

Physical	Typical Value	Unit	Test Method
Specific Gravity	1.30	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage [1]			ASTM D955
Flow: 3.18 mm	1.2	%	
Across Flow: 3.18 mm	1.4	%	
Water Absorption (24 hr)	0.10	%	ASTM D570
Mechanical	**Typical Value**	**Unit**	**Test Method**
Tensile Modulus [2]	3650	MPa	ASTM D638
Tensile Strength [2]	96.5	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield [2]	5.2	%	
Break [3]	> 50	%	
Break [2]	20 to 30	%	
Flexural Modulus	3700	MPa	ASTM D790
Flexural Strength	146	MPa	ASTM D790
Impact	**Typical Value**	**Unit**	**Test Method**
Notched Izod Impact	91	J/m	ASTM D256
Unnotched Izod Impact	No Break		ASTM D256

Hardness	Typical Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec)	88		ASTM D2240
Thermal	**Typical Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Annealed	162	°C	
Glass Transition Temperature (DSC)	150	°C	ASTM D3418
Melting Temperature	340	°C	ASTM D3418
CLTE - Flow (-50 to 50°C)	0.000043	cm/cm/°C	ASTM E831
Fill Analysis	**Typical Value**	**Unit**	**Test Method**
Melt Viscosity (400°C, 1000 sec^-1)	380	Pa·s	ASTM D3835

Injection	Typical Value	Unit
Drying Temperature	150	°C
Drying Time	4.0	hr
Rear Temperature	355	°C
Middle Temperature	365	°C
Front Temperature	370	°C
Nozzle Temperature	375	°C
Mold Temperature	175 to 205	°C
Injection Rate	Fast	
Screw Compression Ratio	2.5:1.0 to 3.5:1.0	

Injection Notes
Back Pressure: minimum

Notes

Typical properties: these are not to be construed as specifications.

[1] 5" x 0.5" x 0.125" bar

[2] 51 mm/min

[3] 5.1 mm/min

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Material Safety Data Sheets (MSDS) are available by emailing us or contacting your sales representative. Always consult the appropriate MSDS before using any of our products.

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