

KetaSpire® KT-820 SL10

polyetheretherketone

Ketaspire KT-820 SL10 is a polyetheretherketone (PEEK) based compound designed to offer enhanced lubricity and reduced friction compared to standard PEEK. Unlike other grades formulated for wear resistance, this grade offers high lubricity while retaining outstanding ductility and toughness that surpasses that of unmodified high viscosity PEEK. Also, this product offers high melt flow, which allows injection molding of thin, intricate, or complex parts.

In addition to these differentiating features, this resin also offers the outstanding combination of ultra-performance

attributes commonly known for PEEK. These include: mechanical strength and stiffness even at elevated temperatures, long term thermal-oxidative stability, fatigue resistance, and excellent chemical resistance to a broad range of harsh chemical environments including acids, bases, and organics.

The attractive combination of properties make Ketaspire KT-820 SL10 suitable for applications in transportation, electronics, chemical processing, and industrial uses including oil and gas exploration and production.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	• South America
Features	• Fatigue Resistant • Flame Retardant	• Good Chemical Resistance • Good Dimensional Stability	• Good Wear Resistance • High Heat Resistance
Uses	• Film • Industrial Applications • Oil/Gas Applications	• Profiles • Rods • Sheet	• Tubing
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding	• Machining	• Profile Extrusion

Physical

	Typical Value Unit	Test Method
Specific Gravity	1.35 g/cm ³	ASTM D792
Molding Shrinkage		ASTM D955
Flow: 3.20 mm ¹	1.2 to 1.4 %	
Across Flow: 3.20 mm ²	1.6 to 1.8 %	
Water Absorption (24 hr)	0.10 %	ASTM D570

Mechanical

	Typical Value Unit	Test Method
Tensile Modulus ³	3600 MPa	ASTM D638
Tensile Strength ³	88.0 MPa	ASTM D638
Tensile Elongation		
Yield ³	5.2 %	ASTM D638
Break ³	60 %	ASTM D638
Break	60 %	ISO 527-2/1A/50
Flexural Modulus	3500 MPa	ASTM D790
Flexural Strength		ASTM D790
--	134 MPa	
Yield	134 MPa	

Impact

	Typical Value Unit	Test Method
Notched Izod Impact	170 J/m	ASTM D256
Unnotched Izod Impact	No Break	ASTM D4812

Hardness	Typical Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec)	83		ASTM D2240
Thermal	Typical Value	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Annealed	155	°C	ASTM D648
Fill Analysis	Typical Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec ⁻¹)	170	Pa·s	ASTM D3835
Injection	Typical Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0	hr	
Rear Temperature	365	°C	
Middle Temperature	370	°C	
Front Temperature	375	°C	
Nozzle Temperature	380	°C	
Mold Temperature	175 to 205	°C	
Injection Rate	Fast		
Screw Compression Ratio	2.5:1.0 to 3.5:1.0		

Notes

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

¹ 5" x 0.5" x 0.125" bars

² 5" x 0.5" x 0.125" bar

³ 50 mm/min

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