KetaSpire® KT-880 FW30
polyetheretherketone

KetaSpire® KT-880 FW30 is a polyetheretherketone (PEEK) compound with higher flow than KetaSpire® KT-820 SL30, making it more suitable for injection molding applications. It is designed to deliver 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 anti-friction/anti-wear additive system comprised of carbon fiber 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.

These properties make it well-suited for applications in transportation, electronics, chemical processing, and industrial uses including oil and gas exploration and production. The resin is black in color in its natural state.

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Carbon Fiber, 30% Filler by Weight	
Features	• Autoclave Sterilizable • Chemical Resistant • E-beam Sterilizable • Ethylene Oxide Sterilizable • Fatigue Resistant • Flame Retardant • Good Dimensional Stability • Good Sterilizability • Heat Sterilizable	• High Flow • High Heat Resistance • High Stiffness • High Strength • Radiation (Gamma) Resistant • Radiation Sterilizable • Steam Resistant • Steam Sterilizable
Uses	• Aircraft Applications • Connectors • Dental Applications • Electrical/Electronic Applications • Film • Hospital Goods • Industrial Applications	• Medical Devices • Medical/Healthcare Applications • Oil/Gas Applications • Pump Parts • Seals • Surgical Instruments
RoHS Compliance	• Contact Manufacturer	
Automotive Specifications	• GM GMW16841P-PEEK-CF15-PTFE15 Color: Natural	
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding • Machining	• Profile Extrusion

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Physical	Typical Value	Unit	Test method
Density	1.45	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (400°C/5.0 kg)	50	g/10 min	ASTM D1238
Molding Shrinkage			ISO 294-4
Across Flow	0.55	%	
Flow	0.012	%	
PV Limit [1]	300000 to 400000	psi·fpm	

Mechanical	Typical Value	Unit	Test method
Tensile Modulus			
--	13500	MPa	ASTM D638
--	16000	MPa	ISO 527-1
Tensile Stress			
Break	180	MPa	ISO 527-2
--	194	MPa	ASTM D638
Tensile Elongation			
Break	1.8	%	ASTM D638
Break	1.7	%	ISO 527-2
Flexural Modulus			
--	13500	MPa	ASTM D790
--	13200	MPa	ISO 178
Flexural Strength			
--	280	MPa	ASTM D790
--	260	MPa	ISO 178
Compressive Strength	138	MPa	ASTM D695
Shear Strength	83.0	MPa	ASTM D732
Coefficient of Friction [2]	0.28		ASTM D3702
Wear Factor (0.22 MPa, 4.1 m/sec)	46	10^-8 mm³/N·m	ASTM D3702

Impact	Typical Value	Unit	Test method
Notched Izod Impact			
--	68	J/m	ASTM D256
--	7.0	kJ/m²	ISO 180
Unnotched Izod Impact	530	J/m	ASTM D4812

Hardness	Typical Value	Unit	Test method
Rockwell Hardness	99		ASTM D785

Thermal	Typical Value	Unit	Test method
Glass Transition Temperature	147	°C	ISO 11357-2
Melting Temperature	343	°C	ISO 11357-3

Fill Analysis	Typical Value	Unit	Test method
Melt Viscosity (400°C, 1000 sec^-1)	150	Pa·s	ASTM D3835

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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] GMW 16771-Sequence B

[2] Dry

SYENSQO