

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).

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.

KetaSpire® PEEK is produced to the highest industry standards and is characterized by a distinct

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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polyetheretherketone

Physical	Typical Value	Unit	Test method
Density	1.45	g/cm ³	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 mm ³ /N·m	ASTM D3702

Impact	Typical Value	Unit	Test method
Notched Izod Impact			
--	68	J/m	ASTM D256
--	7.0	kJ/m ²	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

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