

KetaSpire® KT-880 CF30

Polyetheretherketone
Solvay Specialty Polymers

Message:

KetaSpire® KT-880 CF30 is a high flow, 30% carbon fiber reinforced grade of polyetheretherketone (PEEK). Carbon-fiber reinforcement of KetaSpire® PEEK provides the maximum levels of mechanical properties at temperatures approaching 300°C and the lowest coefficient of linear thermal expansion within the KetaSpire® product family.

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.

General Information	
UL YellowCard	E140728-100211987
Filler / Reinforcement	Carbon Fiber,30% Filler by Weight
Features	Autoclave Sterilizable
	E-beam Sterilizable
	Ethylene Oxide Sterilizable
	Fatigue Resistant
	Flame Retardant
	Good Chemical Resistance
	Good Dimensional Stability
	Good Sterilizability
	Heat Sterilizable
	High Flow
	High Heat Resistance
	High Stiffness
	High Strength
	Radiation (Gamma) Resistant
	Radiation Sterilizable
	Radiotranslucent
	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

Agency Ratings	FAA FAR 25.853a 3
RoHS Compliance	Contact Manufacturer
Appearance	Black
Forms	Pellets
Processing Method	Injection Molding Machining Profile Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.41	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	11	g/10 min	ASTM D1238
Molding Shrinkage ¹			ASTM D955
Flow : 3.18 mm	0.0 to 0.20	%	
Across Flow : 3.18 mm	1.4 to 1.6	%	
Water Absorption (24 hr)	0.10	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	106		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
--	20900	MPa	ASTM D638
--	25400	MPa	ISO 527-2/1A/1
Tensile Stress			
Yield	218	MPa	ISO 527-2/1A/5
--	223	MPa	ASTM D638
Tensile Elongation			
Break ²	1.7	%	ASTM D638
Break	1.7	%	ISO 527-2/1A/5
Flexural Modulus			
--	17900	MPa	ASTM D790
--	21500	MPa	ISO 178
Flexural Strength			
--	321	MPa	ASTM D790
--	319	MPa	ISO 178
Compressive Strength	188	MPa	ASTM D695
Shear Strength	103	MPa	ASTM D732
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact			
--	64	J/m	ASTM D256
--	8.5	kJ/m ²	ISO 180
Unnotched Izod Impact			
--	640	J/m	ASTM D4812
--	43	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed)	315	°C	ASTM D648
Glass Transition Temperature	147	°C	ASTM D3418
Peak Melting Temperature	343	°C	ASTM D3418
CLTE - Flow (-50 to 50°C)	6.7E-6	cm/cm/°C	ASTM E831
Specific Heat			DSC
50°C	1310	J/kg/°C	
200°C	1810	J/kg/°C	
Thermal Conductivity	0.37	W/m/K	ASTM C177
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.800 mm	V-0		
1.60 mm	V-0		
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec ⁻¹)	450	Pa·s	ASTM D3835
Injection	Nominal 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		
NOTE			
1.	5" x 0.5" x 0.125" bars		
2.	5.0 mm/min		

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