

KetaSpire® KT-820 GF30

Polyetheretherketone
Solvay Specialty Polymers

Message:

KetaSpire® KT-820 GF30 is a medium flow, 30% glass fiber reinforced grade of polyetheretherketone (PEEK). This resin offers higher strength and stiffness properties relative to unreinforced KetaSpire® PEEK resin. Reinforcement also affords greater mechanical robustness in structural applications, particularly those with service temperatures approaching 300°C.

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

Beige: KetaSpire® KT-820 GF30 BG20

General Information	
UL YellowCard	E140728-100211984
Filler / Reinforcement	Glass 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 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

Seals

Surgical Instruments

Agency Ratings	FAA FAR 25.853a 3 ISO 10993 ISO 10993-Part 1
RoHS Compliance	RoHS Compliant
Appearance	Beige
Forms	Pellets Powder
Processing Method	Injection Molding Machining Profile Extrusion
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1) Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.53	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	0.70	g/10 min	ASTM D1238
Molding Shrinkage ¹			ASTM D955
Flow : 3.18 mm	0.20 to 0.40	%	
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)	100		ASTM D785
Durometer Hardness (Shore D, 1 sec)	91		ASTM D2240

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	10500	MPa	ASTM D638
--	11400	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield ³	158	MPa	ASTM D638
Yield	165	MPa	ISO 527-2/1A/5
--	158	MPa	ASTM D638
Nominal Tensile Strain at Break			
-- ⁴	2.7	%	ASTM D638
--	2.7	%	ISO 527-2/1A/5

Flexural Modulus			
--	10300	MPa	ASTM D790
--	10700	MPa	ISO 178
Flexural Strength			
--	271	MPa	ASTM D790
--	246	MPa	ISO 178
Yield	261	MPa	ASTM D790
Compressive Strength	169	MPa	ASTM D695
Shear Strength	93.1	MPa	ASTM D732
Poisson's Ratio	0.34		ASTM E132
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
--	110	J/m	ASTM D256
--	13	kJ/m ²	ISO 180
Unnotched Izod Impact			
--	960	J/m	ASTM D4812
--	56	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	150	°C	ASTM D3418
Peak Melting Temperature	340	°C	ASTM D3418
CLTE - Flow (-50 to 50°C)	1.7E-5	cm/cm/°C	ASTM E831
Specific Heat			DSC
50°C	1300	J/kg/°C	
200°C	1730	J/kg/°C	
Thermal Conductivity	0.29	W/m/K	ASTM E1530
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.9E+17	ohms	ASTM D257
Volume Resistivity	1.9E+17	ohms · cm	ASTM D257
Dielectric Strength (3.00 mm)	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.44		
1 kHz	3.44		
1 MHz	3.41		
Dissipation Factor			ASTM D150
60 Hz	1.0E-3		
1 kHz	1.0E-3		
1 MHz	3.0E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.60 mm	V-0		

20.3 mm	V-0		
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec ⁻¹)	850	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"		
2.	5.0 mm/min		
3.	5.0 mm/min		
4.	Type 1A, 5 mm/min		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

