KetaSpire® KT-820

Polyetheretherketone

Solvay Specialty Polymers

Message:

KetaSpire KT -820 is a low flow grade unreinforced polyetheretherketone (PEEK), which is lubricating granular. KetaSpire PEEK is processed according to the highest industry standards and is characterized by different properties, including excellent wear resistance, first-class fatigue resistance, easy melt processing, high purity, excellent resistance to organic matter, acids and alkalis and other chemical substances. These characteristics make it very suitable for medical care, transportation, electronics, chemical processing and other industrial applications. KetaSpireKT -820 can be easily processed using conventional injection molding and extrusion processes. There is a natural color coarse powder grade KetaSpire KT-820P for mixing. Granular KT- 820 is sprayed with lubricant calcium stearate (0.01%) to facilitate the transportation of particles in plasticizing screw. There are low flow grades KetaSpire KT-820 NL similar to non-lubricated natural colors available.
black: KT-820 BK 95

General Information	
UL YellowCard	E140728-100211981
Additive	Lubricant
Features	Good dimensional stability
	Electron beam disinfection
	Radioactive permeable
	Radiation disinfection
	Pressure cooker disinfection
	Good disinfection
	Ethylene oxide disinfection
	Anti-gamma radiation
	Impact resistance, good
	Good chemical resistance
	Fatigue resistance
	Heat resistance, high
	Steam resistance
	thermal disinfection
	ductility
	Disinfect with steam
	Flame retardancy
Uses	Films
	Pump parts
	Gear
	Electrical/Electronic Applications
	Aircraft applications
	Industrial application
	Pipe fittings
	Connector

	Seals
	Application in Automobile Field
	Oil/Gas Supplies
	Surgical instruments
	Shell
	Dental application field
	Medical/nursing supplies
	Medical equipment
	Medical devices
Agency Ratings	FAA FAR 25.853a 3
	ISO 10993
	ISO 10993-Part I
RoHS Compliance	RoHS compliance
Appearance	Black
	Natural color
Forms	Particle 4
Processing Method	Film extrusion
	Wire & Cable Extrusion
	Machining
	Extrusion blow molding
	Thermoforming
	Profile extrusion molding
	Injection molding
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	1.30	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Molding Shrinkage [1]			ASTM D955
Flow	1.1 - 1.3	%	ASTM D955
Transverse flow	1.3 - 1.5	%	ASTM D955
Water Absorption (24 hr)	0.10	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	97		ASTM D785
Durometer Hardness (Shore D, 1 sec)	88		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Tensile Modulus			
-- [2]	3500	MPa	ASTM D638
--	3830	MPa	ISO 527-2/1A/1
Tensile Stress			
Yield	96.0	MPa	ISO 527-2/1A/50
-- [3]	95.0	MPa	ASTM D638
Tensile Elongation			
Yield [4]	5.2	%	ASTM D638
Yield	4.9	%	ISO 527-2/1A/50
Fracture [5]	20 - 30	%	ASTM D638
Fracture	20 - 30	%	ISO 527-2/1A/50
Flexural Modulus	3700	MPa	ASTM D790, ISO 178
Flexural Strength			
--	146	MPa	ASTM D790
--	121	MPa	ISO 178
Compressive Strength	118	MPa	ASTM D695
Shear Strength	84.1	MPa	ASTM D732
Poisson's Ratio	0.33		ASTM E132
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
--	91	J/m	ASTM D256
--	9.2	kJ/m^2	ISO 180
Unnotched Izod Impact	No Break		ASTM D4812, ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load [6] (1.8 MPa, Annealed, 3.20 mm)	157	°C	ASTM D648
Glass Transition Temperature	150	°C	ASTM D3418
Peak Melting Temperature	340	°C	ASTM D3418
CLTE - Flow (-50 to 50°C)	4.3E-5	cm/cm/°C	ASTM E831
Specific Heat			DSC
50°C	1560	J/kg/°C	DSC
200°C	2150	J/kg/°C	DSC
Thermal Conductivity	0.24	W/m/K	ASTM E1530
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.9E+17	ohms	ASTM D257
Volume Resistivity	1.6E+17	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
0.0508mm, amorphous film	200	kV/mm	ASTM D149
3.00 mm	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.06		ASTM D150
1 kHz	3.10		ASTM D150

1 MHz	3.05		ASTM D150
Dissipation Factor			ASTM D150
60 Hz	1.0E-3		ASTM D150
1 kHz	1.0E-3		ASTM D150
1 MHz	3.0E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	V-1		UL 94
1.60 mm	V-0		UL 94
Oxygen Index	37	%	ASTM D2863
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec^-1)	440	Pa·s	ASTM D3835

Additional Information
标准包装及标签 - 根据订单数量,KetaSpire树脂可用聚乙烯桶或纸箱包装.单独包装上清楚列明品名,颜色,批号,净重.

Injection	Nominal Value	Unit
Drying Temperature	150	°C
Drying Time	4.0	hr
Rear Temperature	355	°C
Middle Temperature	365	°C
Front Temperature	370	°C
Nozzle Temperature	375	°C
Mold Temperature	175 - 205	°C
Injection Rate	Fast	
Screw Compression Ratio	2.5:1.0 - 3.5:1.0	

Injection instructions
干燥: - KetaSpire聚醚醚树脂必须在熔融加工前,彻底干燥.否则,容易造成成型部件形成表面条纹甚至严重起泡等程度不同的缺陷.塑料粒子可以在循环空气烘箱中的托盘或除湿料斗干燥机上干燥.干燥条件建议:150 °C(300 °F)温度下4小时. 注塑成型: KetaSpire聚醚树脂可以容易地在大多数螺杆注塑机上注射成型.因背压最小,建议采用压缩比为2.5 ~ 3.5:1的通用螺杆 ,作为是最小背压.注射速度应该尽可能快,使产品外观均匀一致.建议模具温度范围为175 ～205 ° C (350 °F~400 °F).建议机筒起始温度按下表所示.

NOTE	
1.	0.125"x0.5"x5" bar
2.	50 mm/min
3.	50 mm/min
4.	50 mm/min
5.	50 mm/min
6.	200°C,2 hours

Recommended distributors for this material

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