KetaSpire® KT-880 FW30

Polyetheretherketone

Solvay Specialty Polymers

Message:

KetaSpire KT-880 CF30 is a high fluidity, 30% carbon fiber reinforced polyether ether ketone (PEEK). When the temperature is close to 300 °C, the mechanical properties of carbon fiber reinforced KetaSpire PEEK reach the highest level in the industry and have the lowest linear thermal expansion coefficient of KetaSpire product series. KetaSpire PEEK is processed according to the highest industry standards and is characterized by various excellent properties, including excellent wear resistance, first-class fatigue resistance, easy melt processing, high purity, excellent resistance to organic matter, acids and alkalis and other chemicals. These characteristics make it very suitable for medical care, transportation, electronics, chemical processing and other industrial applications.

General Information				
Filler / Reinforcement	Carbon fiber reinforced material, 30% filler by weight			
Features	Good dimensional stability			
	Electron beam disinfection			
	Radiation disinfection			
	Rigidity, high			
	High strength			
	Pressure cooker disinfection			
	Good disinfection			
	Ethylene oxide disinfection			
	Anti-gamma radiation			
	High liquidity			
	Good chemical resistance			
	Fatigue resistance			
	Heat resistance, high			
	Steam resistance			
	thermal disinfection			
	Disinfect with steam			
	Flame retardancy			
Uses	Films			

Pump parts Electrical/Electronic Applications Aircraft applications Industrial application Connector Seals Oil/Gas Supplies Surgical instruments Dental application field Medical/nursing supplies

Medical equipment

Medical devices

AppendeBickFormalParticeFormalMachingProcessing MethodMachingProcessing MethodParticeParticeParticeParticeNamiNationParticeMachingParticeMarina (Marcing)ParticeMarcing <t< th=""><th>RoHS Compliance</th><th>Contact manufacturer</th><th></th><th></th></t<>	RoHS Compliance	Contact manufacturer		
Processing MethodMathining Profile extunion molding ligitation moldingPrylicalNominal ValueInitTest MethodDeniry145g/Cm ² So 1183Meth Mass-Flow Rate (MFR) 400°C/S 00050g/Cm ² So 1183Pr Umit ¹ 00000 - 400000gir /gmTest MethodPr Umit ¹ Nominal ValueUnit in ConstructionTest MethodRockwell Hardness99Test MethodTest MethodRockwell HardnessNominal ValueNotinal ValueNotinal ValueRockwell Hardness190Test MethodTest MethodTestile ModulusNominal ValueNotinal ValueNotinal ValueTestile Modulus190MPa ConstructionSo 527-2Testile Modulus19000 - 40000MPa ConstructionSo 527-2Testile Modulus19000 - 40000MPa ConstructionSo 527-2Testile Modulus180MPa ConstructionSo 100-2Testile Modulus180MPa ConstructionSo 100-2Testile Modulus180MPa ConstructionSo 100-2Testile Modulus180MPa ConstructionMPa ConstructionTestile Modulus180MPa ConstructionMPa ConstructionTestile Modulus180M	Appearance	Black		
Profile extuaion modifigPhysicalNormal ValueUnitTest MotionPhysicalNormal ValueGroff on Stat MittagePhysicalA0000 400000grifmTest MotionPhysicalNormal ValueUnitTest MotionPhysicalNormal ValueUnitTest MotionRockeral9Test MotionTest MotionParia1300MariaMariaParia1300MariaSto S2-2Paria18MariaMariaParia18MariaMariaParia18MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300MariaMariaParia1300 <t< td=""><td>Forms</td><td>Particle</td><td></td><td></td></t<>	Forms	Particle		
Ipication of the second seco	Processing Method	Machining		
PhysicalNaminal ValueUnitTast MethodDensity1.45g/r01 min150.1183Melt Mas-Flow Rate (MR) (400°C/5.0 kg)50g/r01 minMotol 238Melt Mas-Flow Rate (MR) (400°C/5.0 kg)50000 - 400000psi f-pmTest MethodPr Limit 1Nomind ValueUnitTest MethodRockwell Hardness99-ASTM D785MachanicalNominal ValueUnitTest MethodTensile Modulus-1500MPaSD 527-2Tensile Kross11500MPaSD 527-2Tensile Stross-180MPaSD 527-2Tensile Etongation194MPaSD 527-2Fracture180MPaSD 527-2Fracture184MPaSD 527-2Fracture194MPaSD 527-2Fracture194MPaSD 527-2Fracture184MPaSD 527-2Fracture184MPaSD 527-2Fracture194MPaSD 527-2Fracture184MPaSD 527-2Fracture184MPaSD 527-2Fracture184MPaSD 527-2Fracture184MPaSD 527-2Fracture194MPaSD 1078Compressive Strongth184MPaSD 1078Compressive Strongth184MPaSD 1078Compressive Strongth184MPaASTM 0790Strong ZompanASTM 201MPa		Profile extrusion molding		
Density1.45g/cm²160 1183Melt Mass-Flow Rate (MFR) (400°C/50 kg)50g/10 minASTM D1238PV Linit 130000 - 400000pis frpmTest MethodRockwell HardnessNominal ValueUnitTest MethodRockwell Hardness99		Injection molding		
Density1.45g/cm²160 1183Melt Mass-Flow Rate (MFR) (400°C/50 kg)50g/10 minASTM D1238PV Linit 130000 - 400000pis frpmTest MethodRockwell HardnessNominal ValueUnitTest MethodRockwell Hardness99				
Meth Mass-Flow Rate (MFR) (400°C/S.0 kg)50g/10 minASTM D1238PV Limit 130000 - 400000psi-fpmHardnessNominal ValueUnitTest MethodRockwell Hardness99STM D285MechanicalNominal ValueUnitTest MethodTensile ModulusUnitTest MethodTensile ModulusWPaASTM D63813500MPaSo 527-2Tensile StressImage StressSo 527-2Tensile ElongationSo 527-2So 527-2Fracture180MPaASTM D638Tensile StressImage StressSo 527-2Fracture180MPaSo 527-2Fracture180MPaSo 507-2Fracture180MPaSo 507-2Fracture180MPaSo 507-2Fracture1300MPaSo 507-2Fracture180MPaSo 507-2Fracture1300MPaSo 507-2Fracture1300MPaSo 507-2Fracture1300MPaSo 1078Fracture1300MPaSo 1078Fracture280MPaSo 1078Compressive Strength8.0MPaASTM D792Coeffict of Friction ² 0.28MPaSo 1070Shear Strength8.0MPaASTM D590Coeffict of Friction ² 0.28MPaSo 1070Nothel Izzd ImpactNominal ValueUnit Minet MethodMear Factor (0.22	Physical	Nominal Value	Unit	Test Method
P U Limit 130000 - 400000psi-fpmHardnessNominal ValueUnitTest MethodRockwell Hardness99Test MethodMechanicalNominal ValueUnitTest MethodTensle ModulusTest MethodTest MethodTensle Modulus16000MPaASTM D63816000MPaS0 527-2Tensle StressTest MethodS0 527-2Tensle StressNPaS0 527-2Tensle ElongationS0 527-2S0 527-2Tensle ElongationNPaS0 527-2Fracture180MPaS0 527-2Fracture180MPaS0 527-2Fracture180MPaS0 527-2Fracture180MPaS0 527-2Fracture180MPaS0 527-2Fracture1300MPaS0 527-2Fracture130MPaS0 527-2Fracture130MPaS0 527-2Fracture1300MPaS0 527-2Fracture1300MPaS0 527-2Fracture1300MPaS0 527-2Fracture1300MPaS0 527-2Fracture1300MPaS0 527-2Fracture200MPaS0 527-2Fracture1300MPaS0 527-2Fracture1300MPaS0 57-2Fracture200MPaS0 170Fracture1300MPaS0 170Fracture320MPaASTM D730	Density	1.45	g/cm³	ISO 1183
HardnessNominal ValueUnitTest MethodRockwell Hardness9	Melt Mass-Flow Rate (MFR) (400°C/5.0 kg)	50	g/10 min	ASTM D1238
Rockwell Hardness99ASTM D785MechanicalNominal ValueUnitTestMethodTensile Modulus13500MPaASTM D63816000MPaSO 527-2Tensile Stress194MPaSO 527-2r-acture180MPaSO 527-2r-acture194MPaSO 527-2r-acture194MPaSO 527-2r-acture194MPaSTM D638r-acture194MPaSTM D638r-acture18%SO 527-2r-acture18%STM D638r-acture18%STM D638r-acture18%STM D638r-acture1350MPaSTM D638r-acture1350MPaSTM D790r-acture1350MPaSTM D790r-acture280MPaSTM D790r-acture138MPaSTM D790compressive Strength18MPaSTM D790Strength28VSTM D790coefficient of Friction ² 02NPaSTM D790Mear Factor (022 MPa, 41 m/sec)4610^4 antm³/N-mASTM D790Northed Izod Impact68J/mASTM D256r-acture68J/mSTM D256r-acture50J/mSTM D256r-acture50J/mSTM D256r-acture50J/mSTM D4512	PV Limit ¹	300000 - 400000	psi•fpm	
MechanicalNominal ValueUnitTest MethodTensile Modulus1500MPaASTM D63816000MPaISO 527-2Tensile Stress180MPaISO 527-2Tensile Stress194MPaASTM D638Tensile ElongationFracture194MPaASTM D638Tensile Stress1.3% AGAASTM D638Tensile Elongation50 527-2StressStressFracture1.8% AGAASTM D638Fracture1.3% AGAStressFracture1.3MPaASTM D638Flexural Modulus13500MPaASTM D79013500MPaASTM D790260MPaStressCompressive Strength3.0MPaASTM D695Shear Strength3.0MPaASTM D695Coefficient of Friction ² 0.28StressVeer Factor (022 MPa, 4.1 m/sec)4610~4 mm³/n·mNothed Izod Impact7.0MmaASTM D25668J/mASTM D256500J/mASTM D256500J/mASTM D256	Hardness	Nominal Value	Unit	Test Method
Tensile Modulus13500MPaASTM D6386000MPaIsO 527-2Tensile Stress180MPaSO 527-2194MPaSSTM D638Tensile ElongationFacture1.8So 527-2Fracture1.8%0ASTM D638Fracture1.8%0SO 527-2Fracture1.8%0SO 527-2Fracture1.8%0SO 527-2Fracture1.8%0SO 527-2Fracture1.3%0SO 527-2Fracture1.3MPaSO 527-2Fracture1.3MPaSO 527-2Fracture1.3MPaSO 527-2Fracture1.3MPaSO 527-2Fracture1.3MPaSTM D638Fexural Strength13200MPaSIC 178Compressive Strength138MPaASTM D790Shear Strength3.0MPaASTM D732Coefficient of Friction ² 0.28Intel ModuleVear Factor (0.22 MPA, 4.1 m/sec)4610^-8 mm²h·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact70Ki/m²SIC 180100MinalManoASTM D256100MinalManoASTM D256100MinalManoASTM D256100MinalManoManoNotched Izod Impact100Minal <t< td=""><td>Rockwell Hardness</td><td>99</td><td></td><td>ASTM D785</td></t<>	Rockwell Hardness	99		ASTM D785
NPaASTM D6386000MPa05 527-2Fracture180MPaS0 527-2194MPaASTM D638Tensile Elongation1NPaASTM D638Fracture1.8% 0ASTM D638Fracture1.8% 0ASTM D638Fracture1.8% 0ASTM D638Fracture1.8% 0ASTM D638Fracture1.3MPaASTM D638Fracture1.3MPaASTM D7041.300MPaASTM D704Fexural Strength260MPaASTM D704260MPaASTM D635Shear Strength3.8MPaASTM D635Coefficient of Friction ² 0.28MPaASTM D732Quer Factor (0.22 MPA 4.1 m/sec)4610^-4 mm³/N·mASTM D3702Impact0Minal ValueUnitTest MethodAstm Dracture-50.100MPaASTM D556Impact7.0M/m²Siti D 2610Impact50.100M/m²Siti D 2610Impact7.0M/m²Siti D 2610Impact50.100M/m²Siti D 2610Impact50.100M/m²Siti D 2610Impact50.100M/m²Siti D 2610Impact50.100M/m²Siti D 2610Impact50.100M/m²Siti D 2610Impact50.100M/m²Siti D 2610Impact50.100 <td>Mechanical</td> <td>Nominal Value</td> <td>Unit</td> <td>Test Method</td>	Mechanical	Nominal Value	Unit	Test Method
I600MPaIS0 527-2Fracture180MPaIS0 527-2194MPaSto TodasTensile Elongation1Sto TodasSto TodasFracture18%anomASTM D638Fracture1.7%anomSto S27-2Fracture1.8%anomSto TodasFracture1.8%anomSto S27-2Fracture1.8%anomSto TodasFixural Modulus1.7%anomSto TodasFixural Strength1500MPaSto TodasFixural Strength260MPaSto TodasCompressive Strength8.0MPaASTM D790Shear Strength0.8MPaASTM D792Coefficient of Friction 20.8MPaASTM D792Metar Educt (J22 MPa, 4.1 m/sec)4610^4 smm²/N·mASTM D3702Nether EductUnitTest MethodFracture68J/mASTM D256Finance50J/mSto TodasFinance50J/mSto To	Tensile Modulus			
Tensile StressFracture180MPaISO 527-2i-1194MPaASTM D638Tensile Elongation1%anomaASTM D638Fracture1.8%anomaASTM D638Fracture1.7%anomaASTM D638Fracture1.7%anomaASTM D638Flexural Modulus1.7%anomaASTM D709		13500	MPa	ASTM D638
Fracture180MPaISO 527-2Fracture194MPaASTM D638Tensile Elongation*ASTM D638Fracture1.8% 0ASTM D638Fracture1.7% 0SO 527-2Fracture1.7% 0SO 527-2Fexural Modulus**SO 527-213500MPaASTM D79013200MPaSO 178Fexural Strength130MPaSO 178260MPaSO 178Compressive Strength138MPaASTM D790Shear Strength3.0MPaASTM D792Shear Strength8.3.0MPaASTM D792Vear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702Impact681/m AstM D3702STM D3702r-681/m AstM D256So 180r-5.01/m AstM D450So 180 <tr< td=""><td></td><td>16000</td><td>MPa</td><td>ISO 527-2</td></tr<>		16000	MPa	ISO 527-2
194MPaASTM D638Tensile ElongationFracture1.8%ASTM D638Fracture1.8%MonoASTM D638Fracture1.7%MonoMonoFlexural Modulus1%MonoMono13500MPaASTM D79012000MPaMonoMonoFlexural Strength1S0178So178260MPaSo178Compressive Strength38MPaASTM D792Shear Strength8.0MPaASTM D792Coefficient of Friction 20.28So178Near Leot (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactMonial ValueUn'-8 mm³/N·mASTM D3702Notched Izod Impact50J/mASTM D25668J/mSo180So180Notched Izod Impact50J/mSo18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/mSo180So18050J/m <t< td=""><td>Tensile Stress</td><td></td><td></td><td></td></t<>	Tensile Stress			
Fracture1.8% MonormalASTM D638Fracture1.7% ASTM D638160 S27-2Fracture1.7% ASTM D638160 S27-2Flexural Modulus55513500MPaASTM D79013200MPa50 178Flexural Strength260MPaSO 178260MPaSO 178Compressive Strength138MPaASTM D695Shear Strength8.30MPaASTM D792Coefficient of Friction ² 0.28STM D732Wear Factor (0.22 MPa, 4.1 m/sec)4610^-Asmm³/N·mASTM D3702Nominal ValueUnitTest MethodInpact68J/mASTM D25668J/mSO 1807.0K/m²SO 180	Fracture	180	MPa	ISO 527-2
Fracture1.8%ASTM D638Fracture1.7%iSo 527-2Flexural ModulusSo 527-213500MPaASTM D79013200MPaSo 178Flexural StrengthSo 178280MPaASTM D790260MPaSo 178Compressive Strength138MPaASTM D695Shear Strength8.30MPaASTM D695Coefficient of Friction 20.28ASTM D790Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact50J/mASTM D25668J/maSo 180500J/mASTM D4812		194	MPa	ASTM D638
Fracture1.7% MonormalISO 527-2Flexural Modulus13500MPaASTM D79013200MPaISO 178Flexural Strength280MPaASTM D790260MPaS0 178Compressive Strength138MPaASTM D695Shear Strength83.0MPaASTM D792Coefficient of Friction 20.28XTM D732Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702Notched Izod Impact50J/mASTM D25668J/m2ISO 18050J/mASTM D256	Tensile Elongation			
Fexural ModulusFexural Modulus13500MPaASTM D79013200MPaIS0 178Fexural Strength280MPaSTM D790260MPaSO 178Compressive Strength138MPaASTM D695Shear Strength8.0MPaASTM D695Coefficient of Friction 20.28MPaASTM D732Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact50J/mASTM D25668J/m 20ISO 18050J/mSol M0412	Fracture	1.8	%	ASTM D638
NPaASTM D7901300MPaIo 178Flexural Strength200MPaASTM D790200MPaASTM D790200MPaSol 178Compressive Strength138MPaASTM D792Shear Strength83.0MPaASTM D792Coefficient of Friction 20.28ASTM D732Vear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitText MethodNotched Izod Impact50J/mASTM D256530J/m Sol 30J/m AstM D4812	Fracture	1.7	%	ISO 527-2
13200MPaISO 178Flexural Strength280MPaASTM D790260MPaSO 178Compressive Strength138MPaASTM D695Shear Strength83.0MPaASTM D732Coefficient of Friction 20.28STM D732Wear Factor (0.22 MPa, 4.1 m/sec)46Normal MangASTM D3702Nothed Izod ImpactNominal ValueUnitText MethodNotched Izod Impact68J/mASTM D2567.0KJm 23J/m 2010JS0180Unnotched Izod Impact50J/mASTM D4812	Flexural Modulus			
Flexural Strength280MPaASTM D790260MPaSo 178Compressive Strength138MPaASTM D695Shear Strength83.0MPaASTM D732Coefficient of Friction 20.28StrengthASTM D3702Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact58J/mASTM D25650J/m2Io18050J/mASTM D4812		13500	MPa	ASTM D790
280MPaASTM D790260MPaISO 178Compressive Strength138MPaASTM D695Shear Strength83.0MPaASTM D732Coefficient of Friction 20.28STM D3702Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact68J/mASTM D2567.0KJ/m²ISO 180Unnotched Izod Impact530J/mASTM D4812		13200	MPa	ISO 178
260 MPa ISO 178 Compressive Strength 138 MPa ASTM D695 Shear Strength 83.0 MPa ASTM D732 Coefficient of Friction ² 0.28 To -8 mm³/N · m ASTM D3702 Wear Factor (0.22 MPa, 4.1 m/sec) 46 10^-8 mm³/N · m ASTM D3702 Impact Nominal Value Unit Test Method Notched Izod Impact 68 J/m And ASTM D256 10.4 J/m And Iso 180 50 J/m And STM D256	Flexural Strength			
Compressive Strength138MPaASTM D695Shear Strength83.0MPaASTM D732Coefficient of Friction 20.28ASTM D3702Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact68J/mASTM D2567.0KJ/m²ISO 180Imnoched Izod Impact530J/mASTM D254		280	MPa	ASTM D790
Shear Strength83.0MPaASTM D732Coefficient of Friction 20.28ASTM D3702Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact68J/mASTM D2567.0K/m²IsO 180Unnotched Izod Impact530J/mASTM D4812		260	MPa	ISO 178
Coefficient of Friction 20.28ASTM D3702Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact68J/mASTM D25668J/m2ISO 180Unnotched Izod Impact530J/mASTM D4812	Compressive Strength	138	MPa	ASTM D695
Wear Factor (0.22 MPa, 4.1 m/sec)4610^-8 mm³/N·mASTM D3702ImpactNominal ValueUnitTest MethodNotched Izod Impact68J/mASTM D2567.0kJ/m²ISO 180Unnotched Izod Impact530J/mASTM D4812	Shear Strength	83.0	MPa	ASTM D732
ImpactNominal ValueUnitTest MethodNotched Izod Impact68J/mASTM D2567.0kJ/m²ISO 180Unnotched Izod Impact530J/mASTM D4812	Coefficient of Friction ²	0.28		ASTM D3702
Notched Izod Impact Impact ASTM D256 68 I/m ² ISO 180 7.0 kJ/m ² ISO 180 Unnotched Izod Impact 530 J/m ASTM D4812	Wear Factor (0.22 MPa, 4.1 m/sec)	46	10^-8 mm³/N · m	ASTM D3702
68 J/m ASTM D256 7.0 kJ/m² ISO 180 Unnotched Izod Impact 530 J/m ASTM D256	Impact	Nominal Value	Unit	Test Method
7.0kJ/m²ISO 180Unnotched Izod Impact530J/mASTM D4812	Notched Izod Impact			
Unnotched Izod Impact 530 J/m ASTM D4812		68	J/m	ASTM D256
		7.0	kJ/m²	ISO 180
Thermal Nominal Value Unit Test Method	Unnotched Izod Impact	530	J/m	ASTM D4812
	Thermal	Nominal Value	Unit	Test Method

Glass Transition Temperature	147	°C	ISO 11357-2
Melting Temperature	343	°C	ISO 11357-3
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec^-1)	150	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 - 205	°C	
Injection Rate	Fast		
Screw Compression Ratio	2.5:1.0 - 3.5:1.0		
NOTE			
1.	GMW 16771-Sequence B		
2.	Dry		

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

