Solvay Specialty Polymers AvaSpireÂ® AV-621 GF30 Polyaryletherketone (PAEK), 30% Glass Fiber

Category : Polymer , Thermoplastic , Polyketone , Polyaryletherketone (PAEK), Glass Fiber Filled

Material Notes:

AvaSpireÂ® AV-621 GF30 is a 30% glass fiber reinforced version of AvaSpireÂ® AV-621. This formulation offers better dimensional stability and lower warpage than 30% glass reinforced PEEK. This resin retains most of the desirable ultra-performance attributes of glass reinforced PEEK, including chemical resistance, fatigue resistance and long term thermal oxidative stability, but the heat deflection temperature is lower than 30% GF PEEK.Features: Fatigue Resistant; Flame Retardant; Good Chemical Resistance; Good Dimensional Stability; High Heat Resistance; High Stiffness; High StrengthUses: Industrial Applications; Medical Devices; Medical/Healthcare ApplicationsInjection Molding Notes: Back Pressure: MinimumInformation provided by Solvay Specialty Polymers.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-AvaSpire-AV-621-GF30-Polyaryletherketone-PAEK-30-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.55 g/cc	0.0560 lb/inÂ³	ASTM D792
Filler Content	30 %	30 %	Glass Fiber
Water Absorption	0.20 % @Time 86400 sec	0.20 % @Time 24.0 hour	ISO 62
Viscosity	650000 cP @Shear Rate 1000 1/s, Temperature 400 Â°C	650000 cP @Shear Rate 1000 1/s, Temperature 752 Â°F	Melt Viscosity; ASTM D3835
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm @Thickness 3.18 mm	0.0010 - 0.0030 in/in @Thickness 0.125 in	
Linear Mold Shrinkage, Transverse	0.0090 - 0.011 cm/cm @Thickness 3.18 mm	0.0090 - 0.011 in/in @Thickness 0.125 in	ASTM D955
Melt Flow	2.0 g/10 min @Load 2.16 kg, Temperature 400 Â°C	2.0 g/10 min @Load 4.76 lb, Temperature 752 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	101	101	ASTM D785
Tensile Strength	147 MPa	21300 psi	5 mm/min; ASTM D638
Tensile Strength, Yield	158 MPa	22900 psi	5 mm/min, Type 1A; ISO 527-2
Elongation at Break	3.2 %	3.2 %	Type 1A, 5 mm/min; ISO 527-2

Mechanical Properties	Metric	English	Comments
	3.2 %	3.2 %	5 mm/min; ASTM D638
Tensile Modulus	9.90 GPa	1440 ksi	5 mm/min; ASTM D638
	10.6 GPa	1540 ksi	ISO 527-2
Flexural Strength	236 MPa	34200 psi	ISO 178
	237 MPa	34400 psi	ASTM D790
Flexural Modulus	9.40 GPa	1360 ksi	ASTM D790
	9.80 GPa	1420 ksi	ISO 178
Compressive Strength	159 MPa	23100 psi	ASTM D695
Poissons Ratio	0.43	0.43	ASTM E132
Shear Strength	84.5 MPa	12300 psi	ASTM D732
Izod Impact, Notched	1.20 J/cm	2.25 ft-lb/in	ASTM D256
Izod Impact, Unnotched	10.0 J/cm	18.7 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	14.0 kJ/mÂ²	6.66 ft-lb/inÂ²	ISO 180
Izod Impact, Unnotched (ISO)	70.0 kJ/mÂ²	33.3 ft-lb/inÂ²	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	17.0 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	9.44 Âµin/in-Â°F @Temperature -58.0 - 122 Â°F	1
Specific Heat Capacity	1.29 J/g-Â°C @Temperature 50.0 Â°C	0.308 BTU/lb-Â°F @Temperature 122 Â°F	ASTM C351
	1.66 J/g-Â°C @Temperature 200 Â°C	0.397 BTU/lb-Â°F @Temperature 392 Â°F	ASTM C351
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ftÂ²-Â°F	ASTM C177
Melting Point	340 Â°C	644 Â°F	ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	217 Â°C	423 Â°F	Annealed; ASTM D648
Glass Transition Temp, Tg	158 Â°C	316 Â°F	DSC
Flammability, UL94	V-1 @Thickness 0.800 mm	V-1 @Thickness 0.0315 in	

Thermal Properties	Metric	English	Comments
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.10e+17 ohm-cm	2.10e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.90e+17 ohm	>= 1.90e+17 ohm	ASTM D257
Dielectric Constant	3.48 @Frequency 1.00e+6 Hz	3.48 @Frequency 1.00e+6 Hz	ASTM D150
	3.52 @Frequency 60.0 Hz	3.52 @Frequency 60.0 Hz	ASTM D150
	3.53 @Frequency 1000 Hz	3.53 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	15.0 kV/mm @Thickness 3.00 mm	381 kV/in @Thickness 0.118 in	ASTM D149
Dissipation Factor	0.0010 @Frequency 60.0 Hz	0.0010 @Frequency 60.0 Hz	ASTM D150
	0.0010 @Frequency 1000 Hz	0.0010 @Frequency 1000 Hz	ASTM D150
	0.0050 @Frequency 1.00e+6 Hz	0.0050 @Frequency 1.00e+6 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	366 Â°C	691 Â°F	
Middle Barrel Temperature	371 Â°C	700 Â°F	
Front Barrel Temperature	377 Â°C	711 Â°F	
Nozzle Temperature	382 Â°C	720 Â°F	
Melt Temperature	366 - 388 Â°C	691 - 730 Â°F	
Mold Temperature	149 - 177 Â°C	300 - 351 Â°F	
Drying Temperature	149 Â°C @Time 14400 sec	300 Â°F @Time 4.00 hour	

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Beige; Black	
Form	Pellets	
Injection Rate	Fast	
Processing Technique	Injection Molding; Machining; Profile Extrusion	
Screw Compression Ratio	2.0:1.0 to 3.0:1.0	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China