

Solvay Specialty Polymers AvaSpire® AV-848 CF30 Polyaryletherketone (PAEK), 30% Carbon Fiber

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

Material Notes:

AvaSpire® AV-848 CF30 is a 30% carbon fiber-reinforced, high-temperature, polyaryletherketone (PAEK) that has been specifically formulated to provide several performance advantages over comparable grades of PEEK. These include improved dimensional stability, higher stiffness and lower CLTE from 150°C to 240°C, and lower modulus for greater flexibility at room temperature. Features: Fatigue Resistant; Flame Retardant; Good Chemical Resistance; Good Dimensional Stability; High Heat Resistance; High Stiffness; High Strength. Uses: Bearings; Bushings; Oil/Gas Applications; Seals; Wear Strip. Injection Molding Notes: Back Pressure: Minimum. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-AvaSpire-AV-848-CF30-Polyaryletherketone-PAEK-30-Carbon-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ASTM D792
Filler Content	30 %	30 %	Carbon Fiber
Water Absorption	0.10 % @Time 86400 sec	0.10 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.00 - 0.0020 cm/cm	0.00 - 0.0020 in/in	
Linear Mold Shrinkage, Transverse	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	ASTM D955
Melt Flow	3.5 g/10 min @Load 2.16 kg, Temperature 400 °C	3.5 g/10 min @Load 4.76 lb, Temperature 752 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength	176 MPa	25500 psi	5 mm/min; ASTM D638
Elongation at Break	1.5 %	1.5 %	5 mm/min; ASTM D638
Tensile Modulus	18.8 GPa	2730 ksi	5 mm/min; ASTM D638
Flexural Strength	259 MPa	37600 psi	ASTM D790
Flexural Modulus	16.5 GPa	2390 ksi	ASTM D790
Compressive Strength	145 MPa	21000 psi	ASTM D695
Shear Strength	95.0 MPa	13800 psi	ASTM D732
Izod Impact, Notched	0.430 J/cm	0.806 ft-lb/in	ASTM D256

Mechanical Properties <i>Izod Impact, Unnotched</i>	Metric <i>3.30 J/cm</i>	English <i>5.12 ft-lb/in</i>	Comments <i>ASTM D256</i>
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Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0370 W/m-K	0.257 BTU-in/hr-ft ² - Â°F	ASTM C177
Melting Point	340 Â°C	644 Â°F	ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	257 Â°C	495 Â°F	Annealed; ASTM D648
Glass Transition Temp, Tg	158 Â°C	316 Â°F	DSC

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	382 - 404 Â°C	720 - 759 Â°F	
Mold Temperature	166 - 193 Â°C	331 - 379 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	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	

Descriptive Properties	Value	Comments
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