

Solvay Specialty Polymers AvaSpire® AV-848 CF30 Polyaryletherketone (PAEK) (Unverified Data**)

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. High temperature AV-848 CF30 provides design engineers with an alternative to reinforced PEEK, specifically in demanding applications that require superior toughness, higher structural integrity, and exceptional chemical resistance. AvaSpire AV-848 CF30 can be easily processed using standard thermoplastic melt processing techniques, including injection molding and extrusion. Injection 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-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.42 g/cc	1.42 g/cc	ASTM D792
Filler Content	30 %	30 %	Carbon Fiber Reinforcement
Water Absorption	0.10 %	0.10 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.00 - 0.0020 cm/cm	0.00 - 0.0020 in/in	ASTM D955
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	3.5 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 400 °C	@Load 4.76 lb, Temperature 752 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength	176 MPa	25500 psi	5.0 mm/min; ASTM D638
Elongation at Break	1.5 %	1.5 %	5.0 mm/min; ASTM D638
Tensile Modulus	18.8 GPa	2730 ksi	5.0 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

Mechanical Properties	Metric	English	Comments
	5.30 J/cm	9.93 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0370 W/m-K	0.257 BTU-in/hr-ft²-°F	ASTM E1530
Melting Point	340 °C	644 °F	Peak; ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	257 °C	495 °F	Annealed; ASTM D648
Glass Transition Temp, Tg	158 °C	316 °F	DSC

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	366 °C	691 °F	
Middle Barrel Temperature	371 °C	700 °F	
Front Barrel Temperature	377 °C	711 °F	
Nozzle Temperature	382 °C	720 °F	
Melt Temperature	382 - 404 °C	720 - 759 °F	
Mold Temperature	166 - 193 °C	331 - 379 °F	
Drying Temperature	149 °C	300 °F	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Appearance	Black	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Fatigue Resistant	
	Flame Retardant	
	Good Chemical Resistance	

Descriptive Properties	Good Dimensional Stability Value	Comments
	High Heat Resistance	
	High Stiffness	
	High Strength	
Forms	Pellets	
Generic	PAEK	
Injection Rate	Fast	
Processing Method	Injection Molding	
	Machining	
	Profile Extrusion	
Screw Compression Ratio	2.0:1.0 to 3.0:1.0	
Uses	Bearings	
	Bushings	
	Oil/Gas Applications	
	Seals	
	Wear Strip	

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