AvaSpire® AV-848 CF30

Polyaryletherketone

Solvay Specialty Polymers

Message:

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.

General Information	
Filler / Reinforcement	Carbon fiber reinforced material, 30% filler by weight
Features	Good dimensional stability Rigidity, high High strength Good chemical resistance Fatigue resistance Heat resistance, high Flame retardancy
Uses	Bushing Wear strip Seals Oil/Gas Supplies Bearing
RoHS Compliance	Contact manufacturer
Appearance	Black
Forms	Particle
Processing Method	Machining Profile extrusion molding Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.42	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	3.5	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	0.0 - 0.20	%	ASTM D955
Transverse flow	0.40 - 0.60	%	ASTM D955
Water Absorption (24 hr)	0.10	%	ASTM D570

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus [1]	18800	MPa	ASTM D638
Tensile Strength [2]	176	MPa	ASTM D638
Tensile Elongation [3] (Break)	1.5	%	ASTM D638
Flexural Modulus	16500	MPa	ASTM D790
Flexural Strength	259	MPa	ASTM D790
Compressive Strength	145	MPa	ASTM D695
Shear Strength	95.0	MPa	ASTM D732
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	43	J/m	ASTM D256
Unnotched Izod Impact	530	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Annealed)	257	°C	ASTM D648
Glass Transition Temperature	158	°C	DSC
Peak Melting Temperature	340	°C	ASTM D3418
Thermal Conductivity	0.037	W/m/K	ASTM E1530
Injection	**Nominal Value**	**Unit**	
Drying Temperature	149	°C	
Drying Time	4.0	hr	
Rear Temperature	366	°C	
Middle Temperature	371	°C	
Front Temperature	377	°C	
Nozzle Temperature	382	°C	
Processing (Melt) Temp	382 - 404	°C	
Mold Temperature	166 - 193	°C	
Injection Rate	Fast		
Screw Compression Ratio	2.0 : 1.0 - 3.0 : 1.0		
Injection instructions			
Back Pressure: Minimum			
NOTE			
1.	5.0 mm/min		
2.	5.0 mm/min		
3.	5.0 mm/min		

Recommended distributors for this material

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