AvaSpire® AV-848 GF30

Polyaryletherketone

Solvay Specialty Polymers

Message:

AvaSpire® AV-848 GF30 is a 30% glass fiber-reinforced, high-temperature, polyaryletherketone (PAEK) that has been specifically formulated to provide several performance advantages over comparable grades of reinforced 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 GF30 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® PAEK can be easily processed using standard thermoplastic melt processing techniques, including injection molding and extrusion.
Natural: AvaSpire® AV-848 NT

General Information	
Filler / Reinforcement	Glass 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	Seals Oil/Gas Supplies
RoHS Compliance	Contact manufacturer
Appearance	Natural color
Forms	Particle
Processing Method	Machining Profile extrusion molding Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.53	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	9.0	g/10 min	ASTM D1238
Molding Shrinkage [1]			ASTM D955
Flow: 3.18mm	0.20 - 0.40	%	ASTM D955
Transverse flow: 3.18mm	0.50 - 0.70	%	ASTM D955
Water Absorption (24 hr)	0.10	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [2]	10600	MPa	ASTM D638

Tensile Strength [3]	168	MPa	ASTM D638
Tensile Elongation [4] (Break)	2.3	%	ASTM D638
Flexural Modulus	9900	MPa	ASTM D790
Flexural Strength	239	MPa	ASTM D790
Compressive Strength	139	MPa	ASTM D695
Shear Strength	84.8	MPa	ASTM D732
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	69	J/m	ASTM D256
Unnotched Izod Impact	960	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load [5] (1.8 MPa, Annealed, 3.20 mm)	257	°C	ASTM D648
Glass Transition Temperature	158	°C	DSC
Peak Melting Temperature	340	°C	ASTM D3418
Specific Heat			DSC
50°C	1300	J/kg/°C	DSC
200°C	1700	J/kg/°C	DSC
Thermal Conductivity	0.29	W/m/K	ASTM E1530
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.9E+17	ohms	ASTM D257
Volume Resistivity	1.8E+17	ohms·cm	ASTM D257
Dielectric Strength (3.00 mm)	18	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.74		ASTM D150
1 MHz	3.69		ASTM D150
Dissipation Factor			ASTM D150
60 Hz	2.0E-3		ASTM D150
1 MHz	6.0E-3		ASTM D150
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Viscosity (400°C, 1000 sec^-1)	60.0	Pa·s	ASTM D3835
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" x 0.5" x 0.125" bars
2.	5.0 mm/min
3.	5.0 mm/min
4.	5.0 mm/min
5.	200°C,2 hours

Recommended distributors for this material

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