

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

Category : Polymer , Thermoplastic , Polyketone

Material Notes:

AvaSpire® AV-848 is a high-temperature, polyaryletherketone (PAEK) that offers several key performance advantages over comparable grades of PEEK above 150°C, including better dimensional stability, lower CLTE from 150°C to 240°C, and lower modulus for greater flexibility at room temperature. - Natural: AvaSpire AV-848 NTInjection 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-848-Polyaryletherketone-PAEK-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.32 g/cc	1.32 g/cc	ASTM D792
Water Absorption	0.50 %	0.50 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	500000 cP	500000 cP	Melt; ASTM D3835
	@Shear Rate 1000 1/s, Temperature 400 °C	@Shear Rate 1000 1/s, Temperature 752 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength	94.0 MPa	13600 psi	50 mm/min; ASTM D638
Elongation at Break	35 %	35 %	50 mm/min; ASTM D638
	75 %	75 %	5.1 mm/min; ASTM D638
Elongation at Yield	6.7 %	6.7 %	50 mm/min; ASTM D638
Tensile Modulus	3.10 GPa	450 ksi	50 mm/min; ASTM D638
Flexural Strength	134 MPa	19400 psi	ASTM D790
Flexural Modulus	3.30 GPa	479 ksi	ASTM D790
Compressive Strength	118 MPa	17100 psi	ASTM D695
Shear Strength	82.0 MPa	11900 psi	ASTM D732
Izod Impact, Notched	0.750 J/cm	1.41 ft-lb/in	ASTM D256
	NB	NB	ASTM D4812

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.66 J/g-°C	0.394 BTU/lb-°F	DSC
	@Temperature 50.0 °C	@Temperature 122 °F	
	1.66 J/g-°C	0.397 BTU/lb-°F	DSC
	@Temperature 200 °C	@Temperature 392 °F	
Thermal Conductivity	0.220 W/m-K	1.53 BTU-in/hr-ft²-°F	ASTM E1530
Melting Point	340 °C	644 °F	Peak; ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	252 °C	486 °F	Annealed; ASTM D648
Glass Transition Temp, Tg	158 °C	316 °F	ASTM D3418

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.18	3.18	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.21	3.21	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	3.23	3.23	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	180 kV/mm	4570 kV/in	Amorphous Film; ASTM D149
	@Thickness 0.0500 mm	@Thickness 0.00197 in	
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0020	0.0020	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.0060	0.0060	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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 Processing Properties	382 °C Metric	720 °F English	Comments
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	Natural Color	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Ductile	
	Fatigue Resistant	
	Flame Retardant	
	Good Chemical Resistance	
	Good Dimensional Stability	
	Good Impact Resistance	
	High Heat Resistance	
Forms	Pellets	
Generic	PAEK	
Injection Rate	Fast	
Processing Method	Extrusion Blow Molding	
	Fiber (Spinning) Extrusion	
	Film Extrusion	
	Injection Blow Molding	
	Injection Molding	

Descriptive Properties	Machining Value	Comments
	Profile Extrusion	
	Thermoforming	
	Wire & Cable Extrusion	
Screw Compression Ratio	2.0:1.0 to 3.0:1.0	
Uses	Oil/Gas Applications	
	Seals	

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