AvaSpire® AV-630

Polyaryletherketone

Solvay Specialty Polymers

Message:

AvaSpire AV -630 is unreinforced polyaryletherketone (PAEK), which is used to replace low-fluidity PEEK (polyetheretherketone) for ultra-thin film extrusion. Films with a thickness as low as 0.2 mils (5 microns) can be successfully melted and extruded by conventional thermoplastic film extrusion equipment with AV -630. Compared with the corresponding PEEK film, the AV-630 film has certain performance advantages, including better toughness and ductility, higher mechanical integrity when the temperature is higher than 150 °C, better adaptability to adhesives, and more resistance to flame propagation. Ultra-thin films (thickness <15 microns) also show better toughness. Under the same thickness, the hand feel is smoother than PEEK film. Submil thickness films produced by AV -630 can be widely used in various industrial fields. Conventional applications include capacitors, electrical insulation, flexible circuit substrates, special laminates, composite film layers, moisture barriers, linings and aerospace films, such as thermal insulation blanket bagging materials. -natural color: AvaSpire AV-630 NT

General Information	
Features	Good dimensional stability
	Impact resistance, good
	Good chemical resistance
	Fatigue resistance
	Heat resistance, high
	ductility
	Flame retardancy
Uses	Films
	Laminate
	Lining
	Electronic insulation
	Aircraft applications
	Aerospace applications
RoHS Compliance	Contact manufacturer
Appearance	Natural color
Forms	Particle
Processing Method	Film extrusion
	Wire & Cable Extrusion
	Machining
	Extrusion blow molding
	Thermoforming
	Fiber (spinning) extrusion
	Profile extrusion molding
	Injection blowing molding
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Water Absorption (24 hr)	0.20	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	92		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [1]	3300	MPa	ASTM D638
--	3400	MPa	ISO 527-2/1A/1
Tensile Stress			
Yield	89.0	MPa	ISO 527-2/1A/50
-- [2]	92.0	MPa	ASTM D638
Tensile Elongation			
Yield [3]	6.0	%	ASTM D638
Yield	5.4	%	ISO 527-2/1A/50
Fracture [4]	50 - 80	%	ASTM D638
Fracture	50 - 80	%	ISO 527-2/1A/50
Flexural Modulus			
--	320	MPa	ASTM D790
--	3300	MPa	ISO 178
Flexural Strength			
--	127	MPa	ASTM D790
--	128	MPa	ISO 178
Compressive Strength	110	MPa	ASTM D695
Shear Strength	79.0	MPa	ASTM D732
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
--	91	J/m	ASTM D256
--	7.0	kJ/m²	ISO 180
Unnotched Izod Impact	No Break		ASTM D4812, ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load [5] (1.8 MPa, Annealed, 3.20 mm)	181	°C	ASTM D648
Glass Transition Temperature	158	°C	ASTM D3418
Peak Melting Temperature	340	°C	ASTM D3418
Specific Heat			DSC
50°C	1390	J/kg/°C	DSC
200°C	1960	J/kg/°C	DSC
Thermal Conductivity	0.23	W/m/K	ASTM E1530
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.9E+17	ohms	ASTM D257

Volume Resistivity	6.2E+17	ohms·cm	ASTM D257
Dielectric Strength (0.0600mm, amorphous film)	180	kV/mm	ASTM D149
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index	38	%	ASTM D2863
Extrusion	**Nominal Value**	**Unit**	
Drying Temperature	149	°C	
Drying Time	4.0	hr	

Extrusion instructions

干燥: - AvaSpire AV -630树脂必须在熔融加工前,彻底干燥.否则,成型部件表面容易形成条纹甚至严重起泡等程度不同的缺陷.塑料粒子可以在循环空气烘箱中的托盘或除湿料斗干燥机上干燥.干燥条件建议:150 °C(300 °F)温度下4小时.

NOTE	
1.	50 mm/min
2.	50 mm/min
3.	50 mm/min
4.	50 mm/min
5.	200°C,2 hours

Recommended distributors for this material

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