EpiSpire® EP-340

High Temperature Sulfone

Solvay Specialty Polymers

Message:

EpiSpire®EP -340 is a high temperature resistant, high performance, amorphous sulfone polymer. This resin represents a technological breakthrough that sets a new benchmark for the thermal properties of amorphous thermoplastics available to design engineers today. EpiSpire EP -340 resin has a glass transition temperature of 265 °C(509 ° F) and a thermal deformation temperature of 255 °C(491 ° F). The glass transition temperature is at the highest level of fully thermoplastic transparent resin on the market today. In addition to excellent thermal properties, the resin also shows other typical properties and advantages of aromatic sulfone polymers, including high strength, high stiffness, dielectric properties over a wide temperature range, hydrolysis resistance in hot water and steam environments, excellent acid resistance, alkali resistance, and inherent flame retardancy. In addition, the resin also shows a high degree of dimensional control during processing and excellent dimensional stability during the life of the component.
EP -340 resin is very suitable for manufacturing by injection molding, extrusion molding and other thermoplastic manufacturing technologies. With its unique combination of excellent high temperature resistance and other engineering properties, EP- 340 resin has become a good metal substitute material and thermosetting resin substitute material in various engineering applications.
In the natural state, EpiSpire®EP -340 resin is transparent amber. The resin is used in the form of natural color particles and powder for mixing or solution processing.
natural color: EP-340 NT
powder: EP-340P

General Information	
Features	Good dimensional stability
	Rigid, good
	Good strength
	Good chemical resistance
	alkali resistance
	Heat resistance, high
	Hydrolysis resistance
	acid resistance
	Steam resistance
	amorphous
	Flame retardancy
Uses	Metal substitution
RoHS Compliance	Contact manufacturer
Appearance	Transparent amber
	Natural color
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.35	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (400°C/5.0 kg)	10	g/10 min	ASTM D1238

Molding Shrinkage - Flow	9.0E-3	%	ASTM D955
Water Absorption (24 hr)	0.80	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2500	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	94.0	MPa	ASTM D638
Yield, 235°C	45.0	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	7.7	%	ASTM D638
Fracture	15	%	ASTM D638
Fracture, 235°C	> 50	%	ASTM D638
Flexural Modulus	2600	MPa	ASTM D790
Flexural Strength	116	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	91	J/m	ASTM D256
Unnotched Izod Impact	No Break		ASTM D4812
Glass Transition Temperature	265	°C	ASTM E1356
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Annealed, 3.20 mm)	255	°C	ASTM D648
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance (2500 µm)	45.0	%	ASTM D1003
Haze (2500 µm)	15	%	ASTM D1003
Yellowness Index (2.50 mm)	80	YI	ASTM D1925
Injection	**Nominal Value**	**Unit**	
Drying Temperature	149	°C	
Drying Time	4.0	hr	
Processing (Melt) Temp	390 - 410	°C	
Mold Temperature	180 - 210	°C	
Screw Compression Ratio	2.2:1.0		

Injection instructions

干燥: EpiSpire ®EP -340耐高温砜树脂在熔融加工前必须进行干燥.干燥不彻底容易在成型部件表面形成条纹甚至严重起泡等程度不同的缺陷.但是,这种有缺陷的部件也可以通过打磨而恢复外观,因为没有损失性能.树脂粒子可以塑料粒子可以在循环空气烘箱的托盘或料斗干燥机上干燥.
建议干燥条件为:注塑成型:149° C(300 ° F)温度下 4小时,建议含水率<0.05%.对于挤塑成型,干燥应更彻底,含水率应<0.02 %.如用料斗干燥,建议177 °C下(350°F)温度下至少4小时. 注塑成型: EpiSpire®
EP-340树脂可以很容易地在大多数螺杆注塑机上按照紧公差对部件进行注塑加工.储料温度一般为390°C~410 °C(734 °F~770°F)之间 ,具体取决于模具的设计和所用地设备类型.一般建议用压缩比为2.2:1的通用螺杆注塑机,背压取最低值.建议模具温度不低于138 ° C(280 ° F).对于长流 道或薄壁零件,或要求低残余应力的零件,模具温度最高可达190 °C~210 ° C(374° F~410°F) .

Extrusion	**Nominal Value**	**Unit**
Drying Temperature	177	°C
Drying Time	4.0	hr

Recommended distributors for this material

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