

Solvay Specialty Polymers EpiSpire® EP-340 Sulfone, High Temperature (HTS) (Unverified Data**)

Category : Polymer , Thermoplastic , Polysulfone (PSU)

Material Notes:

EpiSpire® EP-340 is a high-temperature, high-performance, amorphous, sulfone polymer. With a glass transition temperature of 265°C (509°F) and a heat deflection temperature of 255°C (491°F), EpiSpire EP-340 resin offers one the highest glass transition temperatures for fully thermoplastic transparent resin on the market today. In addition to this exceptional thermal performance, this resin exhibits the other performance features and attributes typical of aromatic sulfone polymers. These features include good strength, stiffness, and dielectric properties over a wide temperature range, resistance to hydrolysis by hot water and steam environments, excellent resistance to acids and bases, and inherent flammability resistance. The resin also offers a high degree of dimensional control during fabrication and dimensional stability during part service life. EP-340 resin is easily amenable to fabrication by injection molding, extrusion and other thermoplastic fabrication techniques. By virtue of its very high temperature performance and the unique combination of other engineering attributes, EP-340 resin constitutes a good candidate for metal replacement as well as thermoset resin replacement in a wide range of engineering applications. In its natural state, EpiSpire® EP-340 resin is transparent with an amber color. The resin is available in natural pellet and in powder form for the purpose of compounding or solution-based processing. - Natural: EP-340 NT - Powder: EP-340P

Injection Notes:
Drying EpiSpire® EP-340 high-temperature sulfone resin must be dried completely prior to melt processing. Incomplete drying will result in defects in the formed part ranging from surface streaks to severe bubbling. However, such parts may be recovered as regrind, since there will be no loss of properties. Pellets can be dried on trays in a circulating air oven or in desiccated a hopper dryer. Recommended drying conditions for injection molding are 149°C (300°F) for 4 hours. Target moisture content of < 0.05% is recommended for injection molding. For extrusion purposes, more thorough drying is needed with target moisture of < 0.02%. Hopper drying for a minimum of 4 hours at 177°C (350°F) is recommended. Injection Molding EpiSpire® EP-340 resin can be readily injection molded in most screw injection molding machines to close part tolerances. Stock temperature requirements will generally range from 390°C to 410°C (734°F to 770°F), depending on mold design and the type of equipment being used. A general purpose 2.2:1 compression screw is recommended, with minimum back pressure. Mold temperatures of at least 180°C (356°F) are suggested. For long-flow or thin-walled parts, or where low residual stresses are required use mold temperatures of 190°C to 210°C (374°F to 410°F). Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-EpiSpire-EP-340-Sulfone-High-Temperature-HTS-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.35 g/cc	1.35 g/cc	ASTM D792
Water Absorption	0.80 % @Time 86400 sec	0.80 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0090 cm/cm	0.0090 in/in	ASTM D955
Melt Flow	10 g/10 min @Load 5.00 kg, Temperature 400 °C	10 g/10 min @Load 11.0 lb, Temperature 752 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	94.0 MPa	13600 psi	ASTM D638
	45.0 MPa @Temperature 235 °C	6530 psi @Temperature 455 °F	ASTM D638
Elongation at Break	15 %	15 %	ASTM D638
	>= 50 % @Temperature 235 °C	>= 50 % @Temperature 455 °F	ASTM D638
Elongation at Yield	7.7 %	7.7 %	ASTM D638
Tensile Modulus	2.50 GPa	363 ksi	ASTM D638
Flexural Strength	116 MPa	16800 psi	ASTM D790
Flexural Modulus	2.60 GPa	377 ksi	ASTM D790
Izod Impact, Notched	0.910 J/cm	1.70 ft-lb/in	ASTM D256
	NB	NB	ASTM D4812

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	255 °C	491 °F	Annealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Glass Transition Temp, Tg	265 °C	509 °F	ASTM E1356

Optical Properties	Metric	English	Comments
Haze	15 %	15 %	ASTM D1003
	@Thickness 2.50 mm	@Thickness 0.0984 in	
Yellow Index	80 %	80 %	2.50 mm; ASTM D1925
Transmission, Visible	45 %	45 %	ASTM D1003

Processing Properties	Metric	English	Comments
Melt Temperature	390 - 410 °C	734 - 770 °F	
Mold Temperature	180 - 210 °C	356 - 410 °F	
Drying Temperature	149 °C	300 °F	
	177 °C	351 °F	

Dry Time Processing Properties	4.00 hour Metric	4.00 hour English	Comments
	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Appearance	Clear Amber	
	Natural Color	
Availability	Asia Pacific	
	Europe	
	North America	
Features	Acid Resistant	
	Amorphous	
	Base Resistant	
	Flame Retardant	
	Good Chemical Resistance	
	Good Dimensional Stability	
	Good Stiffness	
	Good Strength	
	High Heat Resistance	
	Hydrolysis Resistant	
	Steam Resistant	
Forms	Pellets	
Generic	HTS	
Processing Method	Extrusion	
	Injection Molding	
Screw Compression Ratio	2.2:1.0	
Uses	Metal Replacement	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China