

Solvay Specialty Polymers Radel® R-5900 Polyphenylsulfone (PPSU)

Category : Polymer , Thermoplastic , Polyphenylsulfone (PPSU)

Material Notes:

Radel® R-5900 polyphenylsulfone (PPSU) offers medium melt viscosities for long flow lengths and greater injection molding ease. It also provides exceptional hydrolytic stability and toughness that is superior to that of other commercially available, high-temperature engineering resins. It offers high deflection temperature and outstanding resistance to environmental stress cracking. The resin is inherently flame retardant and has excellent thermal stability and good electrical properties. Features: Acid Resistant; Base Resistant; Flame Retardant; Good Chemical Resistance; Good Flow; Good Thermal Stability; High ESCR (Stress Crack Resist.); High Heat Resistance; Hydrolytically Stable; Steam Sterilizable; Ultra High Toughness Uses: Appliances; Consumer Applications; Food Service Applications Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Radel-R-5900-Polyphenylsulfone-PPSU.php

Physical Properties	Metric	English	Comments
Density	1.29 g/cc	0.0466 lb/in ³	ASTM D792
Water Absorption	0.37 % @Time 86400 sec	0.37 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0070 cm/cm @Thickness 3.18 mm	0.0070 in/in @Thickness 0.125 in	
Melt Flow	26 - 36 g/10 min @Load 5.00 kg, Temperature 365 °C	26 - 36 g/10 min @Load 11.0 lb, Temperature 689 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength	70.3 MPa @Thickness 3.18 mm	10200 psi @Thickness 0.125 in	ASTM D638
Elongation at Break	60 - 120 % @Thickness 3.18 mm	60 - 120 % @Thickness 0.125 in	ASTM D638
Elongation at Yield	7.2 % @Thickness 3.18 mm	7.2 % @Thickness 0.125 in	ASTM D638
Tensile Modulus	2.34 GPa @Thickness 3.18 mm	339 ksi @Thickness 0.125 in	ASTM D638
Flexural Strength	100 MPa @Strain 5.00 %	14500 psi @Strain 5.00 %	ASTM D790

Mechanical Properties	2.34 GPa Metric	339 ksi English	Comments
	@Thickness 3.18 mm	@Thickness 0.125 in	
Izod Impact, Notched	6.90 J/cm	12.9 ft-lb/in	ASTM D256
	@Thickness 3.18 mm	@Thickness 0.125 in	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	56.0 Åµm/m-Å°C	31.1 Åµin/in-Å°F	
	@Thickness 3.18 mm	@Thickness 0.125 in	
Deflection Temperature at 1.8 MPa (264 psi)	207 Å°C	405 Å°F	Unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Glass Transition Temp, Tg	220 Å°C	428 Å°F	ASTM E1356
Flammability, UL94	V-0	V-0	
	@Thickness 0.750 mm	@Thickness 0.0295 in	

Compliance Properties	Metric	English	Comments
NSF	Yes	Yes	NSF 51

Processing Properties	Metric	English	Comments
Melt Temperature	360 - 391 Å°C	680 - 736 Å°F	
Mold Temperature	138 - 163 Å°C	280 - 325 Å°F	
Drying Temperature	149 Å°C	300 Å°F	
	171 Å°C	340 Å°F	
	@Time 14400 sec	@Time 4.00 hour	

Descriptive Properties	Value	Comments
Agency Ratings	NSF 51	
Availability	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Amber; Clear/Transparent	
Form	Pellets	

Descriptive Properties Processing Technique	Value Injection Molding	Comments
RoHS Compliance	RoHS Compliant	
Screw Compression Ratio	2.2:1.0	

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