Solvay Specialty Polymers Veradel® AG-320 Polyethersulfone (PESU) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyethersulfone (PES) , Polyethersulfone (PES), 20%Glass Fiber Filled

Material Notes:

Veradel AG-320 is a 20% glass fiber reinforced grade of polyethersulfone (PESU). Adding glass fiber to polyethersulfone substantially increases the rigidity, tensile strength, creep resistance, dimensional stability and chemical resistance of the material, while maintaining most of its other basic characteristics. The combination of structural properties and cost effectiveness make this resin an attractive alternative to metals in many engineering applications. This grade was formerly marketed as Radel® A PESU - Natural: Veradel AG-320 NTInformation provided by Solvay Specialty Polymers.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Veradel-AG-320-Polyethersulfone-PESU-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D792
Filler Content	20 %	20 %	Glass Fiber Reinforcement
Water Absorption	0.45 % @Time 86400 sec	0.45 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ASTM D955
Melt Flow	6.0 g/10 min @Load 2.16 kg, Temperature 343 °C	6.0 g/10 min @Load 4.76 lb, Temperature 649 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	109 MPa	15800 psi	ASTM D638
Elongation at Break	3.2 %	3.2 %	ASTM D638
Tensile Modulus	5.69 GPa	825 ksi	ASTM D638
Flexural Strength	162 MPa	23500 psi	ASTM D790
Flexural Modulus	6.55 GPa	950 ksi	ASTM D790
Izod Impact, Notched	0.590 J/cm	1.11 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	31.0 µm/m-°C @Thickness 3.18 mm	17.2 µin/in-°F @Thickness 0.125 in	ASTM D696
	214 °C	417 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	@Thickness 3.18 mm	@Thickness 0.125 in	Unannealed; ASTM D648
Flammability, UL94	V-0 @Thickness 0.787 mm	V-0 @Thickness 0.0310 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.84 @Frequency 1000 Hz	3.84 @Frequency 1000 Hz	ASTM D150
	3.84 @Frequency 60.0 Hz	3.84 @Frequency 60.0 Hz	ASTM D150
	3.88 @Frequency 1.00e+6 Hz	3.88 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	17.0 kV/mm	432 kV/in	ASTM D149
Dissipation Factor	0.0015 @Frequency 60.0 Hz	0.0015 @Frequency 60.0 Hz	ASTM D150
	0.0018 @Frequency 1000 Hz	0.0018 @Frequency 1000 Hz	ASTM D150
	0.0081 @Frequency 1.00e+6 Hz	0.0081 @Frequency 1.00e+6 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Melt Temperature	343 - 399 °C	649 - 750 °F	
Mold Temperature	149 - 163 °C	300 - 325 °F	
Drying Temperature	149 - 177 °C	300 - 351 °F	
Dry Time	2.50 - 4.00 hour	2.50 - 4.00 hour	
Back Pressure	0.345 - 0.689 MPa	50.0 - 99.9 psi	

Descriptive Properties	Value	Comments
Agency Ratings	NSF 51	Maximum Temperature of Use: 190°C (375°F)
Appearance	Colors Available	

Natural Color

Descriptive Properties	Value	Comments
Automotive Specifications	FORD WSK-M4D773-A2 Color: BK184 Black	
	FORD WSK-M4D773-A2 Color: NT Natural	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Acid Resistant	
	Flame Retardant	
	Food Contact Acceptable	
	Good Adhesion	
	Good Chemical Resistance	
	Good Creep Resistance	
	Good Dimensional Stability	
	Good Strength	
	Good Thermal Stability	
	Good Toughness	
	High Heat Resistance	
	High Rigidity	
	High Tensile Strength	
	Hydrolysis Resistant	
	Medium Flow	
	Medium Molecular Weight	
Forms	Pellets	
Generic	PESU	
Injection Rate	Fast	
Processing Method	Injection Molding	

Descriptive Properties	Value	Comments
RoHS Compliance	RoHS Compliant	
Screw Compression Ratio	2.0:1.0	
Uses	Appliance Components	
	Appliances	
	Automotive Electronics	
	Batteries	
	Business Equipment	
	Electrical Parts	
	Electrical/Electronic Applications	
	Food Service Applications	
	Industrial Applications	
	Metal Replacement	
	Microwave Cookware	
	Plumbing Parts	
	Valves/Valve Parts	

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