

Solvay Specialty Polymers Udel® GF-120 Polysulfone (PSU) (Unverified Data**)

Category : Polymer , Thermoplastic , Polysulfone (PSU) , Polysulfone, 10% Glass Fiber Reinforced

Material Notes:

Udel GF-120, resin is a 20% glass fiber reinforced polysulfone compound. Glass fiber substantially increases the rigidity, tensile strength, creep resistance, dimensional stability and chemical resistance of the polysulfone resin. The high performance properties and attractive price make these resins particularly effective alternatives to metals in many engineering applications. - Black: Udel GF-120 Bk 937 - Black: Udel GF-120 BK 937 - Natural: Udel GF-120 NT 20 - Grey: Udel GF-120 GY 1234 Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Udel-GF-120-Polysulfone-PSU-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	ASTM D792
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	ASTM D955
Melt Flow	6.5 g/10 min @Load 2.16 kg, Temperature 343 °C	6.5 g/10 min @Load 4.76 lb, Temperature 649 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength	96.5 MPa	14000 psi	ASTM D638
Elongation at Break	3.0 %	3.0 %	ASTM D638
Tensile Modulus	6.00 GPa	870 ksi	ASTM D638
Flexural Strength	148 MPa	21500 psi	ASTM D790
Flexural Modulus	5.52 GPa	801 ksi	ASTM D790
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	ASTM D256
Tensile Impact Strength	109 kJ/m ²	51.9 ft-lb/in ²	ASTM D1822

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	180 °C	356 °F	Unannealed; ASTM D648
Flammability, UL94	HB @Thickness 3.18 mm	HB @Thickness 0.125 in	UL 94

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	2.00e+16 ohm-cm Metric	2.00e+16 ohm-cm English	ASTM D257 Comments
Dielectric Constant	3.28	3.28	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	3.31	3.31	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dissipation Factor	19.0 kV/mm	483 kV/in	ASTM D149
	0.0060	0.0060	
Dissipation Factor	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150
	0.0080	0.0080	
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Melt Temperature	343 - 399 °C	649 - 750 °F	
Mold Temperature	121 - 163 °C	250 - 325 °F	
Drying Temperature	149 - 163 °C	300 - 325 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	
Back Pressure	0.345 - 0.689 MPa	50.0 - 99.9 psi	

Descriptive Properties	Value	Comments
Agency Ratings	ISO 10993	
	ISO 10993-Part 1	
	NSF 51	Maximum Temperature of Use: 149°C (300°F)
	NSF 61	Tested at 82 °C (180 °F) (Commercial Hot)
Appearance	Black	
	Grey	
	Natural Color	
	Opaque	
Availability	Asia Pacific	
	Europe	

Descriptive Properties	North America Value	Comments
	South America	
Features	Acid Resistant	
	Alcohol Resistant	
	Alkali Resistant	
	Autoclave Sterilizable	
	E-beam Sterilizable	
	Ethylene Oxide Sterilizable	
	Food Contact Acceptable	
	Good Chemical Resistance	
	Good Creep Resistance	
	Good Dimensional Stability	
	Good Sterilizability	
	Good Strength	
	Heat Sterilizable	
	High Heat Resistance	
	High Rigidity	
	Hydrocarbon Resistant	
	Hydrolytically Stable	
	Radiation (Gamma) Resistant	
	Radiation Sterilizable	
	Radiotranslucent	
	Steam Resistant	
	Steam Sterilizable	
Filler	Glass Fiber Reinforcement	
Forms	Pellets	
Generic	PSU	
Injection Rate	Fast	

Descriptive Properties	Value	Comments
	Injection Molding	
RoHS Compliance	RoHS Compliant	
Screw Compression Ratio	2.0:1.0	
Uses	Appliance Components	
	Appliances	
	Automotive Electronics	
	Bobbins	
	Dental Applications	
	Electrical Parts	
	Electrical/Electronic Applications	
	Fittings	
	Food Service Applications	
	Hospital Goods	
	Industrial Parts	
	Medical Appliances	
	Medical/Healthcare Applications	
	Microwave Cookware	
	Piping	
	Plumbing Parts	
	Surgical Instruments	
	Valves/Valve Parts	

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