

Solvay Specialty Polymers Udel® P-3703 Polysulfone (PSU)

Category : Polymer , Thermoplastic , Polysulfone (PSU)

Material Notes:

Udel® P-3703 is a high-flow grade of polysulfone intended for injection molding applications with thin walls or long flow lengths. This grade has higher flow than Udel® P-1700 and a slightly greater tendency to stress crack in some aggressive environments. Features: Acid Resistant; Alcohol Resistant; Alkali Resistant; Food Contact Acceptable; Good Chemical Resistance; Good Toughness; High Flow; High Heat Resistance; Hydrocarbon Resistant; Hydrolytically Stable Uses: Appliance Components; Appliances; Automotive Electronics; Batteries; Business Equipment; Electrical Parts; Electrical/Electronic Applications; Food Service Applications; Industrial Parts; Microwave Cookware; Piping; Plumbing Parts; Valves/Valve Parts Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Udel-P-3703-Polysulfone-PSU.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ASTM D792
Water Absorption	0.30 % @Time 86400 sec	0.30 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 in/in	
Melt Flow	17 g/10 min @Load 2.16 kg, Temperature 343 °C	17 g/10 min @Load 4.76 lb, Temperature 649 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	70.3 MPa	10200 psi	ASTM D638
Elongation at Break	50 - 100 %	50 - 100 %	ASTM D638
Tensile Modulus	2.48 GPa	360 ksi	ASTM D638
Flexural Strength	106 MPa	15400 psi	ASTM D790
Flexural Modulus	2.69 GPa	390 ksi	ASTM D790
Izod Impact, Notched	0.690 J/cm	1.29 ft-lb/in	ASTM D256
Tensile Impact Strength	420 kJ/m ²	200 ft-lb/in ²	ASTM D1822

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	56.0 µm/m-°C	31.1 µin/in-°F	
Deflection Temperature at 1.8 MPa (264 psi)	174 °C	345 °F	Unannealed; ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+16 ohm-cm	5.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.02	3.02	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.03	3.03	
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	ASTM D150
	3.04	3.04	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	17.0 kV/mm	432 kV/in	ASTM D149
Dissipation Factor	0.0011	0.0011	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.0013	0.0013	
	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	0.0050	0.0050	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Compliance Properties	Metric	English	Comments
NSF	Yes	Yes	NSF 51

Processing Properties	Metric	English	Comments
Melt Temperature	329 - 385 Å°C	624 - 725 Å°F	
Mold Temperature	121 - 163 Å°C	250 - 325 Å°F	
Drying Temperature	135 - 163 Å°C	275 - 325 Å°F	
	@Time 12600 sec	@Time 3.50 hour	
Shot Size	50 - 75 %	50 - 75 %	

Descriptive Properties	Value	Comments
Agency Ratings	NSF 51	
Availability	Asia Pacific	
	Europe	

Descriptive Properties	Latin America Value	Comments
	North America	
Color	Clear/Transparent	
Form	Pellets	
Processing Technique	Extrusion; Injection Molding	
RoHS Compliance	RoHS Compliant	

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