

Solvay Specialty Polymers Udel® P-3700 HC Polysulfone (PSU) (Unverified Data**)

Category : Polymer , Thermoplastic , Polysulfone (PSU)

Material Notes:

Udel P-3700 HC is a high-clarity grade of polysulfone (PSU) that is nearly water-white in color. This grade was designed to eliminate the yellow cast and provide design flexibility and improved aesthetics for applications where a yellow cast is undesirable. Compared to Udel P-1700, P-3700 HC has higher flow and a slightly greater tendency to stress crack in some aggressive environments. Additional Information: Tensile Elongation at Break, ASTM D638: 30 to 60 % Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Udel-P-3700-HC-Polysulfone-PSU-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D792
Water Absorption	0.30 %	0.30 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 in/in	ASTM D955
	@Thickness 3.18 mm	@Thickness 0.125 in	
Melt Flow	18 g/10 min	18 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 343 °C	@Load 4.76 lb, Temperature 649 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength	75.8 MPa	11000 psi	ASTM D638
Elongation at Break	45 %	45 %	ASTM D638
Elongation at Yield	5.8 %	5.8 %	ASTM D638
Tensile Modulus	2.69 GPa	390 ksi	ASTM D638
Flexural Yield Strength	117 MPa	17000 psi	ASTM D790
Flexural Modulus	2.76 GPa	400 ksi	ASTM D790
Izod Impact, Notched	0.530 J/cm	0.993 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 µm/m-°C	31.1 µin/in-°F	ASTM D696
	178 °C	352 °F	

Thermal Properties <small>Deflection Temperature at 1.8 MPa (104 psi)</small>	Metric <small>@ Thickness 3.18 mm</small>	English <small>@ Thickness 0.125 in</small>	Comments <small>Annealed: ASTM D648</small>
Glass Transition Temp, Tg	185 °C	365 °F	ASTM E1356

Optical Properties	Metric	English	Comments
Refractive Index	1.635	1.635	ASTM D542
Haze	2.0 % <small>@Thickness 2.54 mm</small>	2.0 % <small>@Thickness 0.100 in</small>	ASTM D1003
Yellow Index	2.0 %	2.0 %	2.54 mm; ASTM D1925
Transmission, Visible	77 - 83 %	77 - 83 %	ASTM D1003

Processing Properties	Metric	English	Comments
Feed Temperature	149 °C	300 °F	Hopper Temperature
Melt Temperature	329 - 385 °C	624 - 725 °F	
Mold Temperature	121 - 163 °C	250 - 325 °F	
Drying Temperature	149 °C	300 °F	
Dry Time	3.00 hour	3.00 hour	
	<= 3.50 hour	<= 3.50 hour	
Shot Size	50 - 75 %	50 - 75 %	

Descriptive Properties	Value	Comments
Agency Ratings	FDA Food Contact, Unspecified Rating	
Appearance	Colorless	
Availability	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Acid Resistant	
	Alcohol Resistant	
	Alkali Resistant	
	Good Chemical Resistance	

Descriptive Properties	Value	Comments
	Good Toughness	
	High Clarity	
	High Heat Resistance	
	Hydrocarbon Resistant	
	Hydrolytically Stable	
Forms	Pellets	
Generic	PSU	
Processing Method	Extrusion	
	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Appliance Components	
	Appliances	
	Decorative Parts	
	Electrical/Electronic Applications	
	Food Service Applications	
	Medical/Healthcare Applications	
	Optical Applications	
	Safety Equipment	

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