

Solvay Specialty Polymers Udel® P-1800 Polysulfone (PSU) (discontinued **)

Category : Polymer , Thermoplastic , Polysulfone (PSU)

Material Notes:

Udel P-1800 is a powdered grade of polysulfone with molecular weight similar to that of Udel P-1700 polysulfone. It is well suited for the fabrication of porous membranes that can be made into hollow fibers, tubes, plates or spiral wound elements. These membranes are used in a variety of filtration applications, such as treating potable or waste water, purifying pharmaceuticals, separating gases, and processing blood or dairy and food products. This resin is soluble in commercially available, water-miscible, dipolar, aprotic solvents, like dimethylacetamide (DMAC), dimethylformamide (DMF), and N-methyl pyrrolidone (NMP). This material offers membrane producers very good control of pore size and pore size distribution, high membrane strength and good film-forming properties. The resultant membranes have excellent hydrolytic stability and are compatible with pH's ranging from 2 to 13. They tolerate a variety of cleaning methods, including hydrochloric acid or sodium hydroxide. The resin has a Tg of 185°C indicating high thermal resistance. - Natural: Udel P-1800 NT
11 Features: Acid Resistant; Alcohol Resistant; Alkali Resistant; Good Chemical Resistance; Good Toughness; High Heat Resistance; Hydrocarbon Resistant; Hydrolytically Stable
Uses: Availability: North America
 Information provide by Solvay Specialty Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Udel-P-1800-Polysulfone-PSU-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D792
Water Absorption	0.30 %	0.30 %	24 hrs; ASTM D570
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 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	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
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CTE, linear, Parallel to Flow Thermal Properties	56.0 µm/m-°C Metric	31.1 µin/in-°F English	ASTM D696 Comments
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	3.1	3.1	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.14	3.14	
Dielectric Strength	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	3.15	3.15	
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dissipation Factor	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	
Dissipation Factor	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	0.0050	0.0050	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Drying Temperature	135 - 163 °C	275 - 325 °F	
Dry Time	3.50 hour	3.50 hour	

Descriptive Properties	Value	Comments
Appearance	Natural Color	
Forms	Powder	
Processing Method	Coating	
	Injection Molding	
	Solution Processing	
RoHS Compliance	RoHS Compliant	

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