Udel® P-1710

Polysulfone

Solvay Specialty Polymers

Message:

Udel® P-1710 polysulfone (PSU) is a tough, rigid, high-strength thermoplastic that is suitable for continuous use up to 300°F (149°C). The resin is resistant to oxidation and hydrolysis and withstands prolonged exposure to high temperatures and repeated sterilization.
Udel® P-1710 polysulfone is highly resistant to mineral acids, alkali and salt solutions. Its resistance to detergents and hydrocarbon oils is good, but it will be attacked by polar solvents such as ketones, chlorinated hydrocarbons and aromatic hydrocarbons.
The resin is also highly resistant to degradation by gamma or electron beam radiation. Electrical properties are stable over a wide temperature range and after immersion in water or exposure to high humidity.
Natural: Udel® P-1710 NT 15

General Information	
UL YellowCard	E161096-224289
Features	Acid Resistant
	Alcohol Resistant
	Alkali Resistant
	Good Chemical Resistance
	Good Dimensional Stability
	Good Toughness
	High Heat Resistance
	Hydrocarbon Resistant
	Hydrolytically Stable
Uses	Appliance Components
	Appliances
	Electrical Parts
	Electrical/Electronic Applications
	Fittings
	Food Service Applications
	Industrial Parts
	Microwave Cookware
	Piping
	Plumbing Parts
	Valves/Valve Parts
Agency Ratings	NSF 61 3
RoHS Compliance	RoHS Compliant
Appearance	Colors Available
	Opaque
Forms	Pellets

Processing Method	Extrusion Film Extrusion Injection Molding Pipe Extrusion Profile Extrusion Sheet Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (343°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.70	%	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2480	MPa	ASTM D638
Tensile Strength	70.3	MPa	ASTM D638
Tensile Elongation (Break)	50 to 100	%	ASTM D638
Flexural Modulus	2690	MPa	ASTM D790
Flexural Strength	106	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	69	J/m	ASTM D256
Tensile Impact Strength	420	kJ/m²	ASTM D1822
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	174	°C	ASTM D648
CLTE - Flow	5.6E-5	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	5.0E+16	ohms·cm	ASTM D257
Dielectric Strength	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.15		
1 kHz	3.14		
1 MHz	3.10		
Dissipation Factor			ASTM D150
60 Hz	1.1E-3		
1 kHz	1.3E-3		
1 MHz	5.0E-3		
Injection	**Nominal Value**	**Unit**	
Drying Temperature	135 to 163	°C	
Drying Time	3.5	hr	
Suggested Shot Size	50 to 75	%	
Processing (Melt) Temp	329 to 385	°C	
Mold Temperature	121 to 163	°C	

Recommended distributors for this material

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