Udel® P-1750 MR

Polysulfone

Solvay Specialty Polymers

Message:

Udel® P-1750 MR is a lower color grade of polysulfone that contains a mold release which aids part ejection when parts with low draft are injection molded.
Polysulfones have long been known for transparency and clarity, but have been somewhat limited by a slight yellow cast which has been typical of the material. These grades were designed to eliminate the yellow cast and provide improved aesthetics for applications where a yellow cast is undesirable.
In general, Udel® polysulfone is a tough, rigid, high-strength, high-heat thermoplastic that retains its properties at temperatures from -101°C to 149°C (-150°F to 300°F). With a heat deflection temperature at 1.8 MPa (264 psi) of 174°C (345°F) and excellent thermal and oxidative stability, this resin is suitable for sustained use at temperatures up to 149°C (300°F).
Other key properties of polysulfone include resistance to hydrolysis by hot water and resistance to acids and bases. In addition, the resin is resistant to a wide range of cleaners and disinfectants. Polysulfone's resistance to alcohols and aliphatic hydrocarbons is also good; however, the resin is generally not resistant to polar organic or chlorinated solvents.
Natural/Transparent: Udel® P-1750 NT MR

General Information	
Features	Acid Resistant
	Alcohol Resistant
	Alkali Resistant
	Good Chemical Resistance
	Good Toughness
	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
RoHS Compliance	Contact Manufacturer
Appearance	Clear/Transparent
Forms	Pellets

Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (343°C/2.16 kg)	6.5	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	3.0E+16	ohms·cm	ASTM D257
Dielectric Strength	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	2.90		
1 kHz	3.04		
1 MHz	3.02		
Dissipation Factor			ASTM D150
60 Hz	7.0E-4		
1 kHz	1.0E-3		
1 MHz	6.0E-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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