

LTG-2000

UDEL LTG 2000 polysulfone offers the ability to directly metalize high quality reflective surfaces for applications that require high heat deflection, excellent toughness and dimensional stability. Other desirable properties include thermal stability, creep resistance, and low moisture absorption. The resin exhibits superior flow when injection molded.

Potential applications include automotive headlamp reflectors, fog lamp reflectors, park and turn reflectors, and other applications where excellent surface finish for direct metallization is desired.

UDEL LTG 2000 is available in a variety of colors.

Typical Properties OF UDEL LTG-2000 Resin

Property	ASTM Test Method	Typical Values ⁽¹⁾			
		U.S. Customary units		SI units	
		Value	Units	Value	Units
Mechanical					
Tensile Strength	D 638	10.2	kpsi	70.3	MPa
Tensile Modulus	D 638	360	kpsi	2.48	GPa
Tensile Elongation at Break	D 638	50-100	%	50-100	%
Flexural Strength	D 790	15.4	kpsi	106.2	MPa
Flexural Modulus	D 790	390	kpsi	2.69	GPa
Tensile Impact Strength	D 1822	200	ft-lb/in ²	420	kJ/m ²
Impact Strength- Notched Izod	D 256	1.3	ft-lb/in	69	J/m
Thermal					
Heat Deflection Temperature, at 264 psi (1.8 MPa)	D 648	345	°F	174	°C
Coefficient of Thermal Expansion	D 696	31	µin/in°F	56	µm/m°C
Electrical					
Dielectric Strength	D 149	425	V/mil	17	kV/mm
Dielectric Constant	D 150				
at 60 Hz		3.03		3.03	
at 10 ³ Hz		3.04		3.04	
at 10 ⁶ Hz		3.02		3.02	
Dissipation Factor	D 150				
at 60 Hz		0.0011		0.0011	
at 10 ³ Hz		0.0013		0.0013	
at 10 ⁶ Hz		0.0050		0.0050	
Volume Resistivity	D 257	5 x 10 ¹⁶	ohm-cm	5 x 10 ¹⁶	ohm-cm
General					
Specific Gravity	D 792	1.24		1.24	
Water Absorption, 24 hours	D 570	0.30	%	0.30	%
Melt Flow, 343°C, 2.16 kg	D 1238	17	g/10 min	17	g/10 min
Mold Shrinkage	D 955	0.7	%	0.7	%

⁽¹⁾ Actual properties of individual batches will vary within specification limits.

Drying

UDEL LTG-2000 polysulfone must be dried before fabrication to avoid streaking, splaying, or bubbling. Pellets can be dried in a circulating hot air oven or in a dehumidified hopper dryer.

To oven dry, spread the pellets on trays to a 1-2 inch depth and dry for 3.5 hours at 275°F to 325°F (135°C to 163°C). Handle the dried resin carefully to prevent reabsorption of moisture from the atmosphere.

To hopper dry, use inlet air with a dew point of -25°F (-32°C) at a temperature of 275° to 325°F (135° to 163°C) and a residence time of 3.5 hours.

Injection Molding

UDEL LTG-2000 resin can be readily injection molded on standard screw injection equipment. Although it is recommended that the shot size be between 50 and 75% of machine capacity, UDEL LTG-2000 resin has excellent thermal stability, and good results have been obtained with shot sizes as small as 10% of capacity. Stock temperature will generally range from 625° to 725°F (330° to 385°C), depending on mold design and the type of equipment being used.

A mold temperatures of at least 250°F (121°C) is recommended. In the case of complex parts requiring long flow lengths or having thin cross sections, or where low residual stress levels are required, the mold temperature should be 300°F to 325°F (149°C to 163°C).

Weld line strength of UDEL LTG-2000 resin is generally excellent, but it is good design practice to avoid weld lines in areas known to be subject to high stress.

Standard Packaging and Labeling

UDEL LTG-2000 polysulfone resin is packaged in multiwall paper bags containing 55.115 pounds (25 kg) of material. Special packaging can be supplied upon request. Individual packages will be plainly marked with the product number, the color, the lot number, and the net weight.

Precautionary Labeling

On the basis of the toxicological, physical, and chemical properties of UDEL LTG-2000 polysulfone resin, labeling used on containers is as follows:

Caution! Handling and/or processing this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose, and throat.

Product Safety and Emergency Service

For product safety information or a Material Safety Data Sheet on a product of Solvay Advanced Polymers

1 (800) 621-4557

1 (770) 772-8880 outside of U.S.

For information or help in an emergency such as a spill, leak, fire or explosion, call day or night:

Emergency Health Information

1 (800) 621-4590

1 (770) 772-5177 outside of U.S.

Emergency Spill Information

CHEMTREC 1 (800) 424-9300

1 (703) 527-3887 outside of U.S.

collect calls accepted

For Additional Information

Technical Service

1 (800) 621-4557

Customer Service

1 (800) 848-9744

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