

LG Chemical LUCEL N145LD POM, Chemical Resistance

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, Unreinforced

Material Notes:

Feature: Injection Molding, POM, Chemical Resistance
Application: Electric/Electronic Gears, Automobile speaker Housing
CAS No. 66455-31-0
Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-LUCEL-N145LD-POM-Chemical-Resistance.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.41 g/cc	1.41 g/cc	ASTM D792
Maximum Moisture Content	0.10	0.10	Injection Molding
Linear Mold Shrinkage, Flow	0.018 - 0.021 cm/cm @Thickness 3.20 mm	0.018 - 0.021 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	45 g/10 min @Load 2.16 kg, Temperature 190 Â°C	45 g/10 min @Load 4.76 lb, Temperature 374 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	82	82	ASTM D785
Tensile Strength, Yield	62.3 MPa @Thickness 3.20 mm	9030 psi @Thickness 0.126 in	10mm/min; ASTM D638
Elongation at Break	50 % @Thickness 3.20 mm	50 % @Thickness 0.126 in	10mm/min; ASTM D638
Flexural Yield Strength	93.2 MPa @Thickness 6.40 mm	13500 psi @Thickness 0.252 in	2.8mm/min; ASTM D790
Flexural Modulus	2.65 GPa @Thickness 6.40 mm	384 ksi @Thickness 0.252 in	2.8mm/min; ASTM D790
Izod Impact, Notched	0.539 J/cm @Thickness 6.40 mm, Temperature 23.0 Â°C	1.01 ft-lb/in @Thickness 0.252 in, Temperature 73.4 Â°F	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	160 Â°C @Thickness 6.40 mm	320 Â°F @Thickness 0.252 in	Unannealed; ASTM D648

Thermal Properties Thermal Distortion Temperature at 1.8 MPa (264 psi)	Metric 110 Â°C	English 230 Â°F	Comments Unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
UL RTI, Electrical	110 Â°C	230 Â°F	
	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	110 Â°C	230 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	110 Â°C	230 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
	95.0 Â°C	203 Â°F	
UL RTI, Mechanical with Impact	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	95.0 Â°C	203 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	95.0 Â°C	203 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
	90.0 Â°C	194 Â°F	
UL RTI, Mechanical without Impact	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	95.0 Â°C	203 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	100 Â°C	212 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
	HB	HB	
Flammability, UL94	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	HB	HB	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	HB	HB	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	

Electrical Properties	Metric	English	Comments
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Electrical Properties	Metric 14 ohm-cm	English 14 ohm-cm	Comments
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	3.8 @Frequency 1.00e+6 Hz	3.8 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	24.0 kV/mm @Thickness 1.00 mm	610 kV/in @Thickness 0.0394 in	ASTM D149
Hot Wire Ignition, HWI	0.00 - 7.0 sec @Thickness >=0.710 mm	0.00 - 7.0 sec @Thickness >=0.0280 in	
	0.00 - 7.0 sec @Thickness >=1.50 mm	0.00 - 7.0 sec @Thickness >=0.0591 in	
	7.0 - 15 sec @Thickness >=3.00 mm	7.0 - 15 sec @Thickness >=0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 0.710 mm	>= 120 arcs @Thickness 0.0280 in	
	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	
	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	160 - 180 Â°C	320 - 356 Â°F	Injection Molding
Middle Barrel Temperature	180 - 200 Â°C	356 - 392 Â°F	Injection Molding
Front Barrel Temperature	190 - 200 Â°C	374 - 392 Â°F	Injection Molding
Nozzle Temperature	190 - 200 Â°C	374 - 392 Â°F	Injection Molding
Melt Temperature	190 - 200 Â°C	374 - 392 Â°F	Injection Molding
Mold Temperature	60.0 - 80.0 Â°C	140 - 176 Â°F	Injection Molding
Drying Temperature	90.0 - 110 Â°C	194 - 230 Â°F	Injection Molding
Dry Time	3.00 - 6.00 hour	3.00 - 6.00 hour	Injection Molding
Back Pressure	4.02 - 8.04 MPa	583 - 1170 psi	Injection Molding

Processing Properties	Metric	English	Comments
Screw Speed	40 ~ 100 rpm	50 ~ 100 rpm	Injection Molding

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