

LG Chemical LUPOY GP1000SW PC, Transparent

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Molded

Material Notes:

Description: Injection Molding, PC, General Purpose, Transparency Application: Keypad for Mobile Phone, Automotive (Interior) CAS:

103598-77-2 Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-LUPOY-GP1000SW-PC-Transparent.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Maximum Moisture Content	0.020	0.020	Injection Molding
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	13 g/10 min @Load 1.20 kg, Temperature 300 Å°C	13 g/10 min @Load 2.65 lb, Temperature 572 Å°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength, Yield	60.8 MPa @Thickness 3.20 mm	8820 psi @Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Break	>= 150 % @Thickness 3.20 mm	>= 150 % @Thickness 0.126 in	50mm/min; ASTM D638
Flexural Yield Strength	103 MPa @Thickness 3.20 mm	14900 psi @Thickness 0.126 in	10mm/min; ASTM D790
Flexural Modulus	2.26 GPa @Thickness 3.20 mm	327 ksi @Thickness 0.126 in	10mm/min; ASTM D790
Izod Impact, Notched	>= 7.45 J/cm @Thickness 3.20 mm, Temperature 23.0 Å°C	>= 14.0 ft-lb/in @Thickness 0.126 in, Temperature 73.4 Å°F	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	132 Å°C @Thickness 6.40 mm	270 Å°F @Thickness 0.252 in	Unannealed; ASTM D648

Thermal Properties	Metric	English	Comments
Vicat Softening Point	141 Â°C	286 Â°F	50A °C/H, ASTM D1525
	@Load 5.00 kg	@Load 11.0 lb	
UL RTI, Electrical	130 Â°C	266 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	130 Â°C	266 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical with Impact	130 Â°C	266 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	130 Â°C	266 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical without Impact	130 Â°C	266 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	130 Â°C	266 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
Flammability, UL94	HB	HB	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	HB	HB	
	@Thickness >=3.20 mm	@Thickness >=0.126 in	

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+15 ohm-cm	2.00e+15 ohm-cm	ASTM D257
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	ASTM D492
Comparative Tracking Index	250 V	250 V	IEC 60112
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	60 - 120 sec	60 - 120 sec	

Electrical Properties	@Thickness >=3.00 mm Metric	@Thickness >=0.118 in English	Comments
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
High Voltage Arc-Tracking Rate, HVTR	>= 120 arcs	>= 120 arcs	
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	10.0 - 25.4 mm/min	0.394 - 1.00 in/min	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	260 - 280 Å°C	500 - 536 Å°F	Injection Molding
Middle Barrel Temperature	255 - 280 Å°C	491 - 536 Å°F	Injection Molding
Front Barrel Temperature	250 - 265 Å°C	482 - 509 Å°F	Injection Molding
Nozzle Temperature	250 - 265 Å°C	482 - 509 Å°F	Injection Molding
Melt Temperature	300 - 320 Å°C	572 - 608 Å°F	Injection Molding
Mold Temperature	80.0 - 120 Å°C	176 - 248 Å°F	Injection Molding
Drying Temperature	100 - 120 Å°C	212 - 248 Å°F	Injection Molding
Dry Time	3.00 - 5.00 hour	3.00 - 5.00 hour	Injection Molding
Back Pressure	0.981 - 3.92 MPa	142 - 569 psi	Injection Molding
Screw Speed	40 - 70 rpm	40 - 70 rpm	Injection Molding

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