

LG Chemical Lupoy 1301EP-22 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Description: LUPOY PC 1301EP-22 resin is designed for extrusion and injection molding products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength. Main Characteristics: Low viscosity and Good mold release. Applications: Appliances, Mobile phone keypads and Rigid packaging applications. CAS: 103598-77-2. Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-Lupoy-1301EP-22-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.32 %	0.32 %	equilibrium, 50% RH; ASTM D570
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	0.15 %	0.15 %	ASTM D570
	@Temperature 23.0 Â°C, Time 86400 sec	@Temperature 73.4 Â°F, Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.00050 - 0.00070 cm/cm	0.00050 - 0.00070 in/in	ASTM D955
Melt Flow	22 g/10 min	22 g/10 min	ASTM D1238
	@Load 1.20 kg, Temperature 300 Â°C	@Load 2.65 lb, Temperature 572 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	72	72	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength, Ultimate	66.0 MPa	9570 psi	ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	50mm/min; ASTM D638
Elongation at Break	120 %	120 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Tensile Modulus	2.34 GPa	340 ksi	ASTM D638
Flexural Yield Strength	96.0 MPa	13900 psi	ASTM D790
Flexural Modulus	2.41 GPa	350 ksi	ASTM D790

Mechanical Properties	7.47 J/cm Metric	14.0 ft-lb/in English	Comments
Izod Impact, Notched	@Thickness 3.20 mm, Temperature 23.0 Â°C	@Thickness 0.126 in, Temperature 73.4 Â°F	0.25 mm notch; ASTM D256
Izod Impact, Unnotched	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	ASTM D256
Dart Drop, Total Energy	72.0 J @Thickness 3.20 mm	53.1 ft-lb @Thickness 0.126 in	203m/min; ASTM D3763
Abrasion	45 @Load 1.00 kg	45 @Load 2.20 lb	[%], CS-10 F wheel, 500 cycles; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear	68.0 Âµm/m-Â°C @Temperature -40.0 - 82.0 Â°C	37.8 Âµin/in-Â°F @Temperature -40.0 - 180 Â°F	ASTM D696
Hot Ball Pressure Test	>= 125 Â°C	>= 257 Â°F	IEC 598-1
Deflection Temperature at 0.46 MPa (66 psi)	142 Â°C @Thickness 4.00 mm	288 Â°F @Thickness 0.157 in	Annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	126 Â°C @Thickness 4.00 mm	259 Â°F @Thickness 0.157 in	Unannealed; ASTM D648
	139 Â°C @Thickness 4.00 mm	282 Â°F @Thickness 0.157 in	Annealed; ASTM D648
Vicat Softening Point	147 Â°C @Load 5.10 kg	297 Â°F @Load 11.2 lb	50Â°C/hr; ASTM D1525
Softening Point	150 - 200 Â°C	302 - 392 Â°F	melting point per MSDS
UL RTI, Electrical	125 Â°C @Thickness >=1.50 mm	257 Â°F @Thickness >=0.0591 in	
	125 Â°C @Thickness >=3.00 mm	257 Â°F @Thickness >=0.118 in	
UL RTI, Mechanical with Impact	115 Â°C @Thickness >=1.50 mm	239 Â°F @Thickness >=0.0591 in	
	115 Â°C	239 Â°F	

Thermal Properties	Metric @Thickness >=3.00 mm	English @Thickness >=0.118 in	Comments
UL RTI, Mechanical without Impact	125 Å°C @Thickness >=1.50 mm	257 Å°F @Thickness >=0.0591 in	
	125 Å°C @Thickness >=3.00 mm	257 Å°F @Thickness >=0.118 in	
Flammability, UL94	V-2 @Thickness 0.500 mm	V-2 @Thickness 0.0197 in	ASTM D635
	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	ASTM D635
	V-2 @Thickness 2.50 - 2.70 mm	V-2 @Thickness 0.0984 - 0.106 in	ASTM D635
	V-2 @Thickness 3.00 mm	V-2 @Thickness 0.118 in	ASTM D635
Flash Point	>= 450 Å°C	>= 842 Å°F	
Oxygen Index	26 %	26 %	ASTM D2863
Glow Wire Test	850 Å°C @Thickness 2.00 mm, Time 5.00 sec	1560 Å°F @Thickness 0.0787 in, Time 0.00139 hour	IEC 695-2-1

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
Haze	0.70 - 1.5 %	0.70 - 1.5 %	ASTM D1003
Transmission, Visible	89 %	89 %	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+17 ohm-cm	2.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.0 @Frequency 60.0 Hz	3.0 @Frequency 60.0 Hz	ASTM D150
Dielectric Strength	17.0 kV/mm	432 kV/in	ASTM D149
Dissipation Factor	0.0010	0.0010	ASTM D150

Electrical Properties	@Frequency 60.0 Hz Metric	@Frequency 60.0 Hz English	Comments
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495
Comparative Tracking Index	250 V @Thickness 2.00 mm	250 V @Thickness 0.0787 in	IEC 112
Hot Wire Ignition, HWI	30 - 60 sec @Thickness >=1.50 mm	30 - 60 sec @Thickness >=0.0591 in	
	60 - 120 sec @Thickness >=3.00 mm	60 - 120 sec @Thickness >=0.118 in	
High Amp Arc Ignition, HAI	60 - 120 arcs @Thickness 1.50 mm	60 - 120 arcs @Thickness 0.0591 in	
	60 - 120 arcs @Thickness 3.00 mm	60 - 120 arcs @Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	25.4 - 50.0 mm/min	1.00 - 1.97 in/min	

Descriptive Properties	Value	Comments
Autoignition Temperature	>450Å°C	
Average Extent of Burning	ASTM D635	

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