

LG Chemical Lupoy 3010-22 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Description: LUPOY PC 3010-22 resin is designed for injection molding products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength. Main Characteristics: FDA, Improved chemical resistance and Enhanced flowability while retaining high toughness. Applications: Appliances, Thin wall parts and Electronic/Electrical parts. CAS: 103598-77-2. Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-Lupoy-3010-22-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	
Spiral Flow	27.9 cm	11.0 in	Melt temperature at 330Â°C; Spiral mold 1.5 x 6 mm; 17 mm for 10MFR PC resins

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	72	72	ASTM D785
Tensile Strength, Ultimate	60.0 MPa	8700 psi	ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	50mm/min; ASTM D638
Elongation at Break	100 %	100 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Tensile Modulus	2.40 GPa	348 ksi	ASTM D638
Flexural Yield Strength	96.0 MPa	13900 psi	ASTM D790

Elemental Modulus Mechanical Properties	2.40 GPa Metric	348 ksi English	ASTM D780 Comments
Izod Impact, Notched	8.006 J/cm @Thickness 3.20 mm, Temperature 23.0 Â°C	15.00 ft-lb/in @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	87.0 J @Thickness 3.20 mm	64.2 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	80.0 Â°C @Thickness 0.500 - 2.50 mm	176 Â°F @Thickness 0.0197 - 0.0984 in	
UL RTI, Mechanical with Impact	80.0 Â°C @Thickness 0.500 - 2.50 mm	176 Â°F @Thickness 0.0197 - 0.0984 in	
UL RTI, Mechanical without Impact	80.0 Â°C @Thickness 0.500 -	176 Â°F @Thickness 0.0197 -	

Thermal Properties	2.50 mm Metric	0.0984 in English	Comments
Flammability, UL94	V-2	V-2	ASTM D635
	@Thickness 0.500 - 2.50 mm	@Thickness 0.0197 - 0.0984 in	
	V-2	V-2	ASTM D635
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flash Point	>= 450 Â°C	>= 842 Â°F	
Oxygen Index	26 %	26 %	ASTM D2863
Glow Wire Test	850 Â°C	1560 Â°F	IEC 695-2-1
	@Thickness 2.00 mm, Time 5.00 sec	@Thickness 0.0787 in, Time 0.00139 hour	

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	3.0	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	17.0 kV/mm	432 kV/in	ASTM D149
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Comparative Tracking Index	250 V	250 V	IEC 112
	@Thickness 2.00 mm	@Thickness 0.0787 in	

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

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